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JAMES B. HERRICK, A. B., M. D.

The Corpuscle.

RUSH MEDICAL COLLEGE, CHICAGO, ILL.

MEDICAL DEPARTMENT LAKE FOREST UNIVERSITY.

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EDITORIAL COMMITTEE.

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EDITORIAL.

As a typical representative of that class of men to whom alone is due the rapid advancement, in late years, of medicine as an exact science, we have given this month the likeness of Dr. James Bryan Herrick, whose arduous and painstaking devotion to the thorough prosecution of every detail of his professional work has made him a success where less energy and acumen would have caused failure.

Doctor Herrick has been connected with Rush Medical college since 1889, and from 1891 until the present time has served in the capacity of Adjunct Professor of Practice of Medicine. During these years he has won a host of friends and admirers among Faculty, alumni and students, the latter of whom consider him *par excellence* as a teacher and advisor.

In addition to his regular practice he is attending physician to both the Presbyterian and Cook County hospitals, and

Lecturer on Medicine at the Illinois Training School for Nurses.

He writes extensively for the medical press and is at present in charge of a department of the new journal *Medicine*. He is now engaged with the preparation of a work on diagnosis, which judging from his own proficiency as a diagnostician will be an excellent contribution to medical literature.

It is a matter of considerable interest and conjecture as to how far the requirement of an additional year of college work, which goes into effect with the beginning of the coming session, will affect the attendance at the college the next year.

It is to be hoped that no mercenary or narrow motive will be shown to exist among the medical aspirants, as would be instanced by an enlarged enrollment at the three year schools to the prejudice of those requiring more thorough preparation, but rather such an appreciable increase at rigid schools as would indicate a general desire for greater proficiency.

We learn of several colleges that at the recent meeting of the American Medical College Association declared their intention of demanding a more extensive course, who have failed in the fulfillment of their high resolve and issued their catalogues with the old requirement, but we are glad in perusing the Rush announcement for '95-'96 to find under the requirements for graduation that the candidate "must have taken three (after June 1st, 1897, four) full courses of lectures," etc.

Thus the two classes at present in the institution are the only ones which may graduate under the old provisions, since first year matriculates of this and succeeding sessions will become candidates for graduation after June 1st, 1897, and will therefore be required to take four full courses of lectures.

We quote the following from the *Chicago Correspondence* of the *British Medical Journal* of August 31st: "There is considerable agitation in favor of a million dollar endowment of Rush Medical college, and its consequent affiliation with the new University of Chicago. The present value of the property belonging to the College is said to be between 400,000 and 500,000

dollars, and the attendance of students is regarded as the largest in the country, the number for the last college year being 836. Notwithstanding the erection of large laboratories and many recitation rooms, and a general reconstruction of former quarters, there is yet a need for more room and greater extension of teaching power. These considerations, as well as the advantage of a large endowment, have led up to the connection above mentioned, the consummation of which would be a great advance for both parties interested."

To what extent such an agitation has been carried, or in how far it may be considered as an immediate probability, is unknown to those of us outside the council. Nevertheless we should be glad to learn that such an arrangement was to be perfected as it would greatly enlarge the usefulness of our Alma Mater, and inaugurate with her an era of exceptional prosperity and progress, and would make Chicago the leading medical center in the United States.

In response to what seems to be a general desire among the Alumni, we shall endeavor during the coming year, to present a larger number of clinics and reports of cases than heretofore, hoping thereby to gain their approval and heartier support of the journal.

In this connection we desire to call the attention of the Alumni, whether members of the association or not, to the fact that they owe it to the success of their Alma Mater to do what they can to further her interests, and in so doing indirectly, if not directly, benefit themselves.

A great deal of effort is required in the production of such a journal as THE CORPUSCLE, in the preparation of such a publication as will properly represent what we all believe to be the leading college of the West, and it certainly seems that the Alumni, comprising as they do the majority of the college adherents, should take a prominent part in the support of such an enterprise.

As under-graduates, we assume the responsibility of the business direction and continuance of the journal, and we shall try at all times to keep you posted as to the progress and cur-

rent events at the college, and give you frequent reports of clinics and such like matters of interest.

It is hoped that in future a greater number of the Alumni will be heard from and that they will make a freer use of our columns for the interchange of new ideas in methods and procedure. Let it become a matter of personal concern to each of you to contribute something of general interest to the paper during the year, and the result of such united and harmonious effort will be the production of a journal with which we may all be pleased and satisfied.

The recent action of the State Board of Health requiring the examination this year, of all matriculates at medical colleges within the state, by the authorities of the University of Illinois, is, to say the least, very erratic. What immediate benefit or protection is to be derived from such provision is not apparent, while many objections may very justly be raised. We will note only two.

The general policy of stricter requirements for entrance and more thorough and extensive work in college is heartily indorsed by THE CORPUSCLE and the institution from which it issues, but such a policy should be directed by a board which will fairly represent the sentiment of every institution that it affects, and not rest through the fortuitous occurrence of circumstances in the hands of a single institution, who can appoint such dates and make such arrangements for examinations as will best suit their own immediate interests and to the very evident prejudice of other colleges.

In so far, too, as the application of the ruling for the present year is concerned, it may be considered as *ex post facto*, having been formulated after the issuance of catalogues by the various colleges, and by the provision of which catalogues the colleges are bound.

CONCERNING DIAGNOSIS.

BY JAMES B. HERRICK, A. B., M. D.

ADJUNCT PROFESSOR OF MEDICINE, RUSH MEDICAL COLLEGE.

In response to the invitation of the editor to write on "the value of diagnosis," I have thought it wisest to jot down some thoughts on the subject in the shape of a few simple propositions. These propositions are many of them self-evident to practitioners or to senior students. Yet each one might well be the subject of an essay. It is hoped that they may be of some aid to students just entering upon their medical studies, helping to keep them from the commission of the great mistake so often made, of trying to master in their first and second years, what should be learned in their last years; from undervaluing the practical importance of the so-called primary branches and from underestimating the overwhelming importance of the diagnosis.

1. *Importance of Diagnosis. Therapy follows in natural order after diagnosis.*—J. Adams Allen, the late president of Rush Medical College, was wont, in the course of his lectures on the practice of medicine, to say in his emphatic way: "First find out what is the matter with your patient, then ask, 'what am I going to do about it?'" It seemed almost a superfluous bit of advice, and he seemed needlessly to harp upon the topic—"First find out what is the matter." But with his philosophical mind and his wide experience in dealing with physicians, he knew there was need of just such words of wisdom; for he had seen many physicians beginning in the wrong way with their minds wholly occupied with the great question of therapeutics, the important problem of diagnosis brushed lightly aside, or wholly ignored.

The laity are often satisfied with any kind of a diagnosis; they are more concerned as a general rule, about *what* is done than *why* a thing is done. And influenced largely by this fact and by the knowledge that the aim of medicine is to cure, the young physician, as he sits at the bedside, is thinking of what drug he can give for the pain of which the patient is complaining; of its proper dose, of how it is best administered. And just as he has written what he believes to be a rationally compounded

prescription, calculated to hit all the symptoms, he is nearly taken off his feet by the question: "Well, doctor, what is the matter with me anyway?" He had scarcely thought of that. He should have gone at his case as a lawyer goes at a witness, determined to get the facts from him, even though the witness himself is ignorant of their value, or is unwilling to divulge them. Or better, he should be the jury, weighing carefully all the evidence presented to sight and hearing, before pronouncing judgment. It is as inconsistent for a physician to prescribe and outline his treatment before being sure of his diagnosis, as it would be for the jury to declare the prisoner guilty or not guilty, before hearing the evidence, or for the judge to pronounce sentence before the evidence and arguments on both sides had been concluded or the jury had expressed its opinion.

2. *Diagnosis means more than the naming of disease, it means a knowledge of the pathological condition underlying it.*—This seems to need no argument. But consider for a moment its importance. Take as an example a post-scarlatinal nephritis. How important that the physician should know the pathological process going on in the kidney; that he should be fully alive to the dangers of the continuance of faulty elimination through the diseased organ; that he should fully realize the necessity of not further irritating the kidney, and the need of keeping up vicarious elimination, until nature restores—as she usually does—the damaged kidney to its normal condition.

Unless the physician who recognizes an intestinal obstruction recognizes at the same time the pathological conditions present, the danger of intestinal gangrene, of perforation and of peritonitis, he has made but a partial diagnosis and will be poorly prepared to give the best advice as to medical or surgical treatment.

3. *A knowledge of the elementary branches is an essential to the making of a comprehensive diagnosis.*—An injury to the shoulder is under consideration. Without a knowledge of anatomy the differentiation between sprain, bruise, dislocation, and fracture may be impossible. Assume that it is a dislocation, and again the knowledge of the normal anatomy and physiology of the parts, as well as the morbid anatomy and morbid physiology of the same disturbed parts, is required, in order that the luxation may be skillfully, and not by brute force, readily reduced.

It is impossible for the neurologist to make an accurate diagnosis in the case of many diseases without an intimate

knowledge of the anatomy and physiology of the entire nervous system.

4—*Refinements of diagnosis are requiring yearly of the practitioner, more and more skill in the line of special work, in the handling of instruments of precision, and in the understanding of the results of manipulations that may demand the services of an expert for their proper performance.*

It is, as a matter of fact, a question of vital importance, how much of this should be required of students or of general practitioners. But certainly much more is required, and rightly too, than was asked a score of years or even a decade ago. The microscope has become indispensable to the physician. He must ordinarily trust his own eye to detect the tube-cast. He must be able to stain and recognize tubercle bacilli. The greatest importance attaches to the bacteriological examination of the exudate in the suspected diphtheritic deposit. He who can excise a gland, or a piece of a new growth, prepare the same for microscopic examination, and pass an independent judgement upon the section is a man whose advice as to operation or line of treatment is safer to follow, than that of one whose knowledge is purely of macroscopic appearances. Neurology demands a knowledge of electricity and of ophthalmoscopy. Every student should know how to use the laryngoscope. The stethoscope has become a *sine qua non* in the medical armamentarium. Many diseases call for an examination of the blood, and a knowledge of the proper instruments is demanded. Secretions and excretions are being subjected to more careful and more rigid examinations, as new facts are discovered that have a bearing in diagnosis. The aspirating needle should be a part of the diagnostic outfit of every practitioner.

5. *Skill in diagnosis is only acquired as the result of careful training and wide experience.* That there are certain natural, mental endowments that enable one man to solve the problems of diagnosis more readily than another, is, of course, true. We may, in a limited sense, speak of a natural or born diagnostician. But this ability should not be looked upon as a supernatural or mysterious power, granted only to the genioused few, but as a talent that all possess in varying degree, and that can be cultivated by all. Patient and painstaking observation of cases; careful training of the special senses so that they become quick to detect variations from the normal conformation of parts or the normal performance of function; constant drill in the reading of character and of human nature; daily practice

in sifting out from the patient's history and from the results of examination, that which is important and vital, from that which is trivial and irrelevant; above all, the honest admission of error in diagnosis as evidenced by the later developments of any case or by a post-mortem examination—all this means gradual increase in power as a diagnostician. And right here it may be said, that no training begins to approach in value that to be derived from the observation of cases during life, followed by the examination of the bodies after death, confirming a diagnosis and giving one confidence in one's own ability, or disproving it and teaching one where the error was made. A mistaken diagnosis rightly corrected, is of much more value as a means of instruction, than a brilliantly correct one.

6. *The physician must be ever ready to alter his original diagnosis.*—He must do this, in the first place, when he finds that he has made an error. But in the second place, and it is to this that I wish to direct attention; he should be prepared to learn more and more concerning his cases as he watches it from day to day, until finally his original notion may be very much altered. Let no one force you to make positive assertions concerning an ailment at the first examination, when you feel that justice to yourself and to your patient demands a longer time of observation, or a more complete investigation. Be positive when you are certain you fully understand. But remember that new phenomena and new complications are liable to arise from day to day. This necessitates close watching of the patient. Repeated examinations will prevent many oversights. It is a source of much chagrin to call in a consultant in the case of a disease of the heart or kidneys, for instance, that one carefully examined two weeks before, and have him discover the pleural cavities filled with fluid. One was himself capable of recognizing this complication. Failure came because of lack of repeated examination. It is more often carelessness and neglect that are to blame for errors in diagnosis than ignorance.

7. *The ultimate aim of a diagnosis is to point out the proper remedial measure or therapeutic agent. It is to cure.*—To this end all diagnosis should tend. The diagnosis should, therefore, be a comprehensive one, should embrace a knowledge of the causes operating in the case in hand—etiology—and the probable outcome of the disease if left untreated, i. e., its natural tendency—prognosis. A removable or combatable cause once clearly recognized, points out definitely the therapeutic

means to be employed. The natural tendency of a disease toward recovery, or, on the contrary, an inevitably fatal tendency enables the physician in the one case to guard against complication, and to avoid over-medication; in the other case, to prepare patient and friends for the final dissolution, and to insure as painless and comfortable an illness as possible. Therapy is not rational unless employed in cases where there is an exact knowledge of the malady to be treated, its etiology, pathology, morbid anatomy and the natural course of the disease if untreated.

I will close these desultory remarks by quoting from a recent address of Sir William Broadbent. It is a testimony from one in a high position to the importance of diagnosis, and also, as physicians must be pleased to note, to the very great advancement that has been made in diagnosis.

“The basis of therapeutics is diagnosis, the grasp of the actual condition underlying the symptoms or phenomena, and the greater our command of powerful remedies and the more precise our knowledge of their effects and of the mode in which these effects are produced, the more important does accuracy in diagnosis become. A diagnosis, to be real, implies not only the recognition of the disease which may be present and an accurate appreciation of the morbid changes which have taken place in various organs, it embraces a knowledge of the nature and intensity of the pathological processes which have been and are in operation, and of the causes that set them going, and also of the results to which they tend. A further element, moreover, enters into the consideration: an estimate, by the aspect of the patient, by the pulse and temperature, and by other subjective and objective indications, of the impression made on the system, and of the resistance which it is capable of, to the lethal tendencies of the disease. Year by year we see improvement in this respect; not only that hospital physicians and teachers endeavor to carry diagnosis to a greater pitch of accuracy and a higher point of refinement than ever before, but that the entire body of medical men are trained by improved education and systematic clinical teaching to appreciate and to practice careful diagnosis in their daily work. Diagnosis, we may say, has reached an extraordinary degree of advancement. There are, no doubt, still new fields to conquer, but in the recognition of diseases, local and general, there is not much which concerns the human race which remains to be done.”

THE TRIALS OF THE RURAL MEDICO-SURGICAL SPECIALIST.

BY DR. J. R. BARNETT, Neenah, Wis.

Read at the Scientific Meeting of the Rush Medical College Alumni
Association, May 22nd, 1895.

The study of the evolution, and still more, the distribution, of medico-surgical practice is full of interest, and some day its exposition will enlist the most philosophic mind and the most trenchant pen. Whether regarding the growth and development of this most fascinating of the scientific arts, or only the growing division of labor from the mere craftsman's point of view, the study is full of that which supplies food for reflection and surprises not a few.

Especially the second phase of the question, examined by the light of the setting sun of the last of the nineteenth century, bristles with interrogation and exclamation points, and the most thoughtful of inquirers, looking at it through the most penetrating of spectacles, takes them off at last in bewilderment, and scratches his head in profound meditation.

I do not need to be told that this subject is not in strict harmony with the place and the hour, both of which I know to be sacred alone to scientific inquiry; but may we not, at this commencement season, for once turn away from the burrows among the ologies which all have been ferreting so assiduously, lift our eyes to the light of the upper world of practical life that is just unfolding to so many, and look out upon what it offers to them, or rather to their major fraction, represented by that somewhat important and *very* anxious personage—the country doctor, I say important, but not so, I hasten to add, because of his personality, for that is regarded with due humility, but because of the fraction he represents.

The country doctor is seldom what he is from choice. Were it a matter of simple volition he would almost invariably be a city doctor, with a busy practice at fashionable fees, and an amplitude of revenue corresponding with the importance which justly inheres in such a professional status. Nay more, he would be the chief of a clinic—preferably surgical—which should be a shrine to which thousands of fervid devotees should

annually go up; to rekindle the waning lamp of knowledge, and to which many other thousands would turn their eyes longingly but hopelessly as to the ineffable and unattainable.

To do him justice, he would—such is ambition—prefer to be this last, indifferent to revenue, rather than the former, with all that the condition implies. Still, he would prefer to be the former rather than what he is. In his student days, fired by the renown of his masters and the achievements of their most noble and beneficent art, or lastly, by the baser appeal of wealth and social standing and the seductive luxuriousness of city life, he determines that he will come back when the experience and the cash accumulations of country practice will warrant, and join the shining coterie. He will add one more to the conspicuous few who loom pre-eminent and effulgent among their colleagues, or to the gilded many who carried out a profitable day among fashionable invalids with a pleasurable evening at a reception or dinner or the opera or theater.

Filled with this high hope—this certainty rather—and torn by many a regret, he exiles himself from the great city, faces toward the far frontier, and in course of time his modest sign is seen among others of its kind in some hamlet which, he feels sure, has been awaiting the coming of such as he with scant patience, and will now hail it with enthusiasm. He finds doctors there before him, but without the newness of knowledge he has just brought from the most advanced sect of medical learning, and he anticipates no serious competition from them.

The next day, when the expected rush doesn't overwhelm him, he concludes that the season is healthful in these parts; but when other days come, and still others, until the days have been sheaved into weeks, and the weeks shocked into months, and when he has observed that the old doctors seemed to move with an air of business, and that the undertaker has been abroad in the streets, he finds that good health hasn't taken on the epidemic form that he supposed, and that there have been sick in the community who have really risked their lives in other hands. Of course he regrets this—mostly for their sake, he trusts—and then he resumes his writing and betakes himself to thinking.

But by-and-by another doctor comes along, so that he no longer is "the new doctor," or fate sends a cyclone or a railroad wreck, and he finds himself included in the general and very pressing call for help. He is almost stunned by the surprise of it; but it isn't the only surprise that the emergency

affords. The old-timers are there, too, some of them so old that the ink in the faculty signature to their Latin diplomas has almost faded out of sight. But some of them take hold with an adeptness and a fidelity to the most advanced principles of surgery that makes the new-comer from the metropolitan clinic rub his eyes in bewilderment. On the other hand, some of them—not always old-timers—such as his untutored mind had pictured as the conventional country doctor, stand helplessly by, or, in alleged assistance, with fussy meddlesomeness, add infection to present danger. Of course he is too busy just then to see the moral to this more than twice-told tale; but later he has the time to ponder this and kindred things; and a closer acquaintance with his colleagues shows clearly enough what has digged the widening gulf that separates their abilities. He sees that not age alone, nor native talent, nor even the knowledge of the schools, determines what the doctor is and shall be—that fixes the boundary beyond which he cannot go—beyond which, too often, he does not want to go.

Naturally, as professional acquaintance ripens, he sees how this one fills the full measure of efficiency in every department of practice; how that one is satisfied to be considered “good in fevers” or “death on diphtheria,” and how the other may even take pride in the popular verdict that “he is of no account in sickness, but ‘the best ladies’ doctor in town.”

But as time goes by and inquiry widens, our philosopher gets beyond the personal equation, and begins to probe the mysteries of environment; and these let out a flood of light on what he thought was clear enough before. He then sees that not alone the able and efficient practitioner, but the “diphtheria doctor” and the “woman doctor,” in some greater or smaller degree, have been hampered by bonds not of their own making and held to tasks not always of their own choosing. In his own case time has brought him patronage and public esteem and confidence enough to satisfy a very moderate ambition; but to his philosophic mind it has been a confidence lacking in symmetry; it has been abnormally large, perhaps, as related to the common ills of life, but extremely rudimentary or atrophied as it related to those for which medicine afforded no resource, and whose only hope was in the art of the surgeon. That the rural mind should here turn to the city as holding the only hope he would cheerfully concede to be natural, or, at the worst, not responsible, if only the rural mind would turn with intelligence and discrimination; but when it turns with the fatuous faith

that all city doctors are *ex-officio* accomplished surgeons, the least of whom is greater than the greatest of country practitioners, the matter assumes to him a serious and a funny aspect—the former predominating. He may protest, but it has to be in silence; for he himself is the beneficiary of a kindred faith. The gravest conditions appealing to medical art are confided to his skill with a faith that is childlike in its unreserve. The obscurist visceral and nervous diseases, along with the current fevers, inflammations and dyspepsias, appeal to him in the full belief of the sufferer that all will now be well, if recovery be possible; if not—well, God wills it—no one could do more. Still, he does not fail to note that for long this rustic faith has been very cautiously and tentatively reaching out. Long ago it would submit a fracture or a dislocation to the skill of his hands; for have not country doctors been bone-setters from time immemorial? Even more, should laceration complicate labor at term, he would be expected to repair the torn cervix or perineum with neatness and dispatch, for it's only a matter of a few stitches which any one should easily do! Still more—they in the country know that a strangulated hernia must be reduced, if life is to be preserved for a time, and when gentler measures fail, consent to the knife. More seldom, but still occasionally, a laryngeal stenosis extorts the same submission, but usually when the submission is too late to be availing.

Still more seldom, in the strange pallor and collapse that mark the rupture of an ectopic gestation sac, they turn to him in their mortal fear and abysmal despair, as the drowning clutch at straws.

The trephine is now and then allowed, if a cranial injury result in paralysis or coma, the more readily if visible and extensive fracture of the skull be present; for surely something ought to be done, and there is no time for help from the metropolis. For like reasons gunshot wounds may be dressed on the spot, and the gravest injuries from machinery and explosives, moving trains and an intestinal occlusion or an appendicitis may submit to the rural knife at the last moment, when the operation is practically *sectio cadaveris*, and which the trained hospital veteran, warned by experience, and careful of mortality percentages, would politely decline, or do under protest.

But the emergency and casualty list our friend finds to be a long one, and includes morbid and traumatic conditions that would tax the skill of the most experienced operator, and he

might conclude that such a field of activity afforded fair scope to a rather large professional ambition, but he does not so regard it. Emergencies and casualties are not every day occurrences; and even if they were it goes against the grain that his part in them is an emergency part. That he is a sort of accident among the casualties. He is there because he was near by when they happened, or even because he was believed to possess a little more surgical skill than his colleagues of the country side. Very likely the man for whom he did the herniotomy, and possibly afterward an abdominal section to break up adhesions, very likely this man had been to the city the week before to have a lipoma examined or a carbuncle cauterized or curetted. It is almost certain that the woman for whom he did the immediate trachelorrhaphy would else have had the easier secondary operation done by a specialist, also from the city. That other one, whose ruptured tube he tied off, and ended the peril, immediate and remote, of an ectopic gestation is it probable that she would ever trust him to do a Tait's operation on the other side?

By-and-by he can go a step farther in the analysis of his emergency list, and with far greater edification, if not greater satisfaction. Some brother practitioner of the village has also been weighing this subject, and with as little satisfaction but more practical results. One day he is missed from his accustomed haunts, and the village paper announces that Dr. Smith has gone to the city to find a commensurate field for his well-known abilities as a blankologist. This is something of a surprise; not but that Dr. Smith was a good fellow and a good doctor, but as to that special ology—well, the village paper was the first to bring it to the knowledge of his colleagues or the public. But shortly it begins to be reported by the village paper that this one, and then that one, and then the other—well known citizens of the place, has at great expense undergone an operation by the eminent specialist Dr. Smith, formerly, etc., etc. And our philosopher checks off his emergency list, again and again, scratches his head—this time twice.

Time passes. Old purposes die or pass into profound coma, and new ones, with new responsibilities, come to better fill their place. The old dream of his student days was not the prophetic dream he fully believed it to be. He never went back to grace the shining circle of the immortals, nor to loll in the lap of langorous luxury. Somehow, other ideals gradually grew upon him. The group of the immortals seemed now less

effulgent; the lap of luxury was less enticing. But other objects took new value, and lesser aims seemed not wholly ignoble.

The allurements of home; the stray bonds of many a priceless friendship; the ties of social relationships reaching through a large community; all more or less incompatible with the tireless energy and industry which alone build up the fabric of a great career—were a not grossly unworthy substitute for the objects of the old-time dreams. As for his heroes, he could worship them—perhaps all the better—from afar. But he could still be in touch with them and the great professional world, and with a more inspiring and expansive pleasure than always comes with frequent contact. From afar he still sees them in the bright light of their own genius, and not always without the aureole. From anear there may be the bright lights of too many rival geniuses, but with the jealousies that dim the luster of most of them all. But, afar or anear, with all his heart he joins with the world to laurel their heads to their heart's content.

FIBROID TUMORS OF THE OVARY.

BY DR. B. C. GUDDEN, Oshkosh, Wisconsin.

Read at the Scientific Meeting of the Rush Medical College Alumni Association, May 22nd, 1895.

Virchow, Schroeder, Doran, Thomas and other medical authorities state that fibrous tumors of the ovary are of rare occurrence.

The diagnosis of this specific growth is frequently clouded by symptoms peculiar to cancer and an abundant accumulation of fluid in abdominal cavity.

Differential diagnosis from cysto-fibroma is the large size the latter may attain in short time, while fibrous tumors grow slowly, are non-malignant and therefore often too insignificant for extirpation unless causing, by their movability, irritation and pressure, annoying symptoms or complications.

Peri-uterine fibroids extending into the utero-sacral ligaments are sometimes mistaken for fibrous tumors of the ovary.

Gusserow says "of the causes of fibroid tumors we know as little as of the causes of most pathological new formations—that is nothing" since the acknowledgement of knowing

nothing is the first step towards progress, their is hope yet in this interesting study.

Schroeder dwells on the difficulty, even in cadavers, to trace the original seat or starting point of these growths.

Delafield and Prudden claim that in a number of cases the tumor seemed to originate from the tissue formed in the closure of ruptured Graapian follicles,

Ohlhansen believes to have demonstrated the source by individual proliferation of connective tissue at various points of the tunica albuginea, when the fibroid shows several large nodules.

Goodhart cites a case originating in the external layers of the ovarian stroma.

Crisp and Loyd Roberts report cases which were connected by long pedicles with right or left ovary.

Besides the macroscopic and microscopical appearance, it is the relation of the tube and broad ligament to the growth, which proves the origin beyond doubt.

Fibrous tumors of the ovary are hyperplasia of its stroma involving the whole or part of the gland.

The surface of the tumor may be nodular or smooth, and the ovary, although it has been found in a normal condition is usually displaced and rigid. Every trace of follicles is either destroyed or changed shape in the solid connective tissue. Cysts, bony and cartilaginous structures are liable to be found in the growth. Papillary fibromata of the surface of the ovary extending from this point to the general peritoneum have been noted.

Fibroid tumors of the ovary vary according to Virchow, from the size of a hen's egg to a child's head. Of late years Thornton, J. Williams, Doran and others have operated on fibrous ovarian tumors of large size. The specimen I show you was of considerable weight. Its general appearance coincides almost wholly with a very lucid description of these cases reported by Doran. "The tumors seemed like one mass of wavy bundles of white tissue, in most sections closely packed together, intermixed with small round cells, a few small spindle cells were found, the fibrous tissue of the long axis of the fibres composing the bundles."

The history of my patient is somewhat interesting. Mrs. M. H., aged 30 years, had six children, youngest 19 months. About five months previous to birth of last child, her menses having but been unusually large, she thought it necessary

to consult some physician who, recognizing the presence of a tumor, encouraged operation, but having no confidence in that ignorant class of "tumors humanity", called doctors, she visited the wise midwife, who diagnosed pregnancy and only too true, in the course of time, she gave birth to a living, robust child. The doctors were chagrined. The large abdomen disappeared—the doctors were off and the midwife was on. I saw patient a short, small-boned woman, first on March 10th, 1894, with an enormous enlargement of belly. The intelligent midwife informed her that she was about to have another baby, but the reason patient consulted me was because her menses appeared regularly every month and on questioning, elicited above history. Being thus on my guard, I made a careful examination of the case.

Her general condition was fair, had menstruated regularly since Dec. 20, 1893.

On examination found the enormous abdomen measuring 46 inches around girth, pubis to umbilicus 11; umbilicus to ensiform 14½; anterior superior spine to umbilicus (right side) 15; (left side). Abdominal cavity indicated either the presence of an ascites or an enormous thin-walled senile cyst. In the right lower quarter section of the abdomen would be detected a floating solid body of large dimensions producing an ideal ballottement. Uterus, being completely prolapsed on patient assuming the erect position due to intra-abdominal pressure, was 5 inches in depth, other organs healthy, urine normal. She was admitted to hospital March 21, 1894. Laparotomy three days later. Drained abdominal cavity of 32 pounds of ascitic fluid, when this beautiful fibroid of right ovary with a charming pedicle presented itself. The incision was sufficiently enlarged to remove this tumor weighing 5 pounds 3 ounces. Left ovary cystic and size of an orange was also removed, uterus elevated and fixed in lower angle of wound, abdomen closed, patient made an uninterrupted recovery leaving the hospital April 18, 1894, restored to health, comfort and happiness.

PLASTIC SURGERY METHOD.

DR. F. W. EPLEY, New Richmond, Wis.

Read at the Scientific Meeting of the Rush Medical College Alumni Association, May 22nd, 1895.

What I have to say to you to-day upon the subject of plastic surgery is not theoretical. It is not visionary. It is fact, and is founded upon actual experience in private practice. It can be verified by any one of you who will take the pains to follow closely the details of the method, and it shall be my chiefest object to make these details perfectly plain. I shall strive to leave no important point uncovered, and at the same time use the fewest words possible. My remarks will be confined entirely to the transplantation of skin. Some of them will be directly contradictory to the teaching of the times, but they are true. I shall not stop to make quotations from any author. When I say to you that antiseptics may and should be used freely and throughout the operation, I shall not take up valuable time to quote authorities who tell you this must *not* be done. When I tell you that cocaine may be used upon the donor with the happiest effects, I ask you to accept what I say as true until you have personally proved to the contrary. It is true.

The size of a piece of skin which can be successfully transplanted is limited only by our facilities for obtaining and handling it properly, and the size of the space to be covered which is in condition to receive it.

The size which I have found most practical is about two by five inches. It should be boat shaped. The best place to obtain it is just below the insertion of the Deltoid muscle. It must be boat-shaped because this allows the wound in the donor to be immediately closed by a straight seam, leaving no open sore and but a slight scar. It should be taken from the arm as stated, because this is not a very sensitive locality; is easily dressed; the skin is of proper thickness and texture and well supplied with blood-vessels, while the wound here gives least annoyance to the donor.

OPERATION.

The donor should be seated in a common chair. His arm should be made aseptic in the usual manner; then antiseptic

with a 1 to 1000 Bichloride solution. Eight punctures with an hypodermic syringe should be made just outside the line of the proposed incision and about fifteen minims of a 4 per cent. solution of cocaine (freshly prepared with sterilized water) injected into each puncture. Ligate the arm just above the elbow not too tightly. Now surround the arm with several layers of gauze wet with 1 to 1000 Bichloride solution.

Place the patient in a position which will bring the wound in good light and most accessible. It must be *perfectly clean*, then rendered antiseptic by the free use of 1 to 1000 Bichloride solution. It is most important that all weak granulation tissue be scraped gently or shaved off, and open mouthed vessels oozing bright blood in every part of the space to be covered. Now bind, not too tightly, a pad of gauze wet with 1 to 1000 Bichloride solution closely to the whole oozing surface and the wound is ready. When this is removed the surface will be clean and free from blood, all clots having been caught in the meshes of the gauze. Now remove the gauze from the donor's arm; put the skin upon the stretch, quickly block out the piece to be removed by cutting *clear through the skin* down to the cellular tissue.

Carefully dissect up the upper point of the boat shaped area, securely fasten the hooks on the skin fork into the ends of the flap, and as the skin is carefully *cut*, not torn or scraped, away from the subcutaneous tissue, roll it up on the skin fork, care being taken to roll up nothing but skin free from blood clots or fatty tissue.

Again, bind up the donor's wound with the Bi-chloride soaked gauze and he can wait until you have time to attend to him. Now remove the pad from the patient, apply the free end of the roll to the wound and quickly unroll it upon the raw surface. If it does not fit it matters nothing; let it extend over upon the skin of the patient. It will live so far as the surface is denuded and the surplus skin will necrose or die and can be trimmed off later. The graft should be neither stretched nor pinched, but gently unfolded and smoothed out. Over this apply strips of rubber tissue just taken from a 1 to 1000 Bichloride bath; over this sprinkle a thin coat of Iodoform or Euphen, and then the usual gauze dressing, care being taken not to slide the graft upon its bed or bind it too tightly—just sufficient to make it secure. Now remove the gauze from the donor's wound and carefully draw the edges of skin together with either a continuous suture or interruptul sutures closely

put, dust with Europhen, cover with protective, reinforce the sutures with adhesive plaster and dress with gauze.

Skin transplanted in this manner and cut 48 hours later will bleed even when placed upon the sole of the foot.

I wish to lay special stress upon three things in closing. Use antiseptics freely, cocaine fearlessly, and make the donor's wound boat-shaped. The skin fork spoken of and the knife for removing the graft which I have devised I here show you.

LOCATIONS:

Town 400. No doctor within ten miles. Good country and crops. Man with family and experience preferred. Address H. V. Pugsley, Stockham, Nebr.

W.P.Cook, Buckley, Illinois, would be pleased to communicate with a physician, who speaks German, regarding a location at that place.

Good opening for a young M.D. at Franksville, Wisconsin. Address R. Roberts.

Excellent opportunity for a young man who is a physician and druggist and can speak German or Scandanavian. Address C. W. Braur, Harvey, Wells Co., North Dakota.

Excellent practice with some property and instruments for sale. Address C. A. Jackson, M. D., Kearney, Nebraska.

"A GOOD THING."

The Stationer and Printer for August 15, has the following to say of the new catalogue for this year:

"We are in receipt of the Fifty-Third Annual Announcement of Rush Medical College, of Chicago, consisting of 72 pages and cover. The typography of the *brochure* is excellent; it is printed on the highest grade of paper, and the cover is antique linen. It is very tastefully gotten up and reflects credit on the faculty of the college who had this matter in charge,"

EXTRACTS OF TISSUES AND GLANDS.

BY L. C. WATERS, M. D., Chicago.

(Read at the Scientific Meeting of the Rush Medical College Alumni Association, May 22nd, 1895.)

By the term used as the heading of this article we include all the preparations of tissues and glands which are, or have been, in use as therapeutic agents. The principal preparations are the desiccated gland, the liquid preparations, the raw tissue itself and the active principles.

There has hardly been a time in the history of the world when parts of animals have not been used for the cure of disease, and those who are most conversant with the earlier history of civilization, and who have delved in the records of the past, inform us that evidence is found in great abundance in ancient literature, that the products of the seminal glands of healthy animals were in use as therapeutic agents in very earliest times, even prior to the days of Moses and Ramesis, and all through the literature of the centuries down to the beginning of the eighteenth, we are able to find recipes for decoctions made from the testicles of animals, and used to restore the lost sexual power and to increase the virility of the aged and those who were sexually weak from other causes. Even in our own day and generation, when civilization has spread to almost every country on the face of the globe, we find in some isolated localities bands of people whose cannibalistic tendencies lead them into the habit of eating the testicles and brains of their more fully developed enemies whom they have been fortunate enough to capture and roast, hoping thereby to acquire some of their greatness, either physical or mental, as the case may be. But it has been our good fortune to be able in these later days to place this matter upon a more scientific and consequently more satisfactory basis. Certainly more satisfactory to our æsthetic and civilized ideas of the propriety, although I presume that we will still continue to find isolated cases where "lamb's frie" will be taken into the system as a nutriment to the tissues, in preference to the more elegant hypodermic injection of spermin.

Nearly forty years ago, in 1856, Brown-Sequard gave to

the world a discovery of the greatest importance and favored in practical results, for in that year he demonstrated the vital action of the supra-renal capsules, and of some of the other glands of the body, the functions of which were previously unknown, and announced his belief in the existence of what he was pleased to term the internal secretion of glands. His successful works also inaugurated those of many other physicians and physiologists, and led to many of the discoveries concerning previously unknown primordine functions of many of the glands of the body. The scores of experimentations resorted to gave rise to the conclusion that glands in general, whether with or without ducts, possess an internal secretion, the suppression of which brings about pathological conditions which disappear when the blood is supplied in any way with the elements it lacks.

These internal secretions, the exact nature of which we are probably as yet unacquainted with, are now generally supposed to be the active principles of the tissues from which they are derived. The term secretion in its general way may be applied to every act of cells by which substances of any kind may be separated from the blood, but its application is usually restricted to those cases where the substances withdrawn are not destined to be restored again to the circulating current, but are intended to be eliminated from the body and usually in a liquid form, such as the bile, urine, sweat, etc. This function is an organic one, and is usually performed by the different glands. The theory advanced by Brown-Sequard and now quite generally accepted, was to the effect that the gland cells, secrete substances which are essential to the life of the body, and which are not eliminated from the body, but find their way back into the blood and perform their proper function in this nutrition and support of the body. Such substances are properly termed internal secretions. The glands which secrete such substances are, it is now believed, the spleen, the thymus gland, the thyroid gland, the supra-renal capsules, the pituitary body, the testicles and the ovaries, all of these glands must certainly have a very great influence upon the life and upon the health of the human organism.

In support of this theory of such internal secretions we are reminded of the fact that the removal of any one of these glands from the body produces symptoms peculiar in character to that condition, and which disappear when the organ or part of it is engrafted successfully on the body, also when a por-

tion of the organ is left we find that these symptoms either do not appear at all or are greatly modified. The removal of the testicles in the castration of eunuchs is another instance which gives strong evidence as to the truthfulness of this idea. In Africa there are several methods of procedure in cases of castration, one of which is to remove nearly, but not quite, all of the organ and while this individual is incapable of procreation he still retains virile power and presents a totally different appearance to that of one in whom both testicles and cords have been removed. In this latter case the unfortunate individual loses the shape of man among men, and becomes more effeminate in his appearance, and in character; he is hysterical and nervous, morose and often savage in his tenderness, and withal presents the appearance of a weak and feeble man, mentally, morally and physically, and I believe also, that all gynecologists will agree with me in the assertion that the castration of women will, in nearly all cases, give rise to troubles which are due directly to the operation, and further that those symptoms pass off, if they ever do, only after other glands and tissues supply the required compensatory action.

Some of these glands can be removed in part and some possibly entirely and life will go on the same as ever or at least the same to all appearances. This however can only be the case when other glands take upon themselves a compensatory action. It is certainly true that two of the glands of the body perform special functions and it is further true that these functions form an essential part in the economy. Supra-renal disease gives rise to the class of symptoms known as Addison's disease, and disease or removal, or absence, of the thyroid gland gives rise to the group of symptoms known as myxœdema or exophthalmic goitre, according to the existing conditions of hypertrophy or atrophy of that gland.

We understand that each tissue or organ depends in a mechanical way upon the other and that their conjoined action for the growth of the body as a whole is dependent upon the nervous system and upon the blood which unites the whole. If therefore these internal secretions do exist it is natural to conclude that the destruction of an organ, or of a tissue, will cause ill health in one or more of the other organs or tissues, and following this line of thought the next most natural conclusion is that if ill health is thus produced, then by the introduction of the secretion which is lacking into the blood of an animal suffering from the lack of that secretion, important therapeut-

ic effects will thereby be obtained. This was the idea advanced by Brown-Sequard in 1875, and later he advocated the use of the thyroid juice hypodermically in myxœdema.

From myxœdema we have indeed learned much as to the existence of some secretions of the thyroid gland, which although devoid of ducts, must produce some substance in its parenchyma which is absorbed by the blood and used again by it in the economy, as, if this substance is wanting, then the group of symptoms characteristic of myxœdema results, and, again, if the extracts of this gland be taken into the body, or if the gland itself be eaten, these symptoms very rapidly disappear.

When the pathology of myxœdema became more thoroughly understood, and it became definitely known that the disease was due to the loss of function, or absence of this gland, it was suggested by Victor Horsley that the grafting of a healthy sheep's thyroid should be tried as a means of arresting this disease. The suggestion was carried out and one-half of the thyroid gland taken from a healthy sheep was introduced beneath the skin of the intra-mammary region on each side of a woman aged 36 years, who was suffering from this disease. The operation was followed by immediate improvement, movements became more easy, speech more natural, the red corpuscles increased to the normal standard, the temperature was raised to normal, the subcutaneous swelling diminished, perspiration returned and menstruation was greatly improved. Now as the improvement began the day after the operation it could not have been due to the gland becoming vascularized and therefore functional, and the most reasonable supposition was that the improvement was due to the absorption of the juices of the engrafted gland by the tissues of the body. The subcutaneous injections of the thyroid extract were then suggested and the suggestion acted upon. The symptoms which were produced by thyroidectomy and which were similar to those of myxœdema were entirely removed by these injections, and this mode of administering this remedy has always been accompanied by very good results. Continuing these investigations experiments were made in the disease of the thyroid gland of an opposite character to that of the one just considered, or rather in those diseases due, apparently at least to opposite pathological conditions of the gland than those which caused myxœdema. These injections were used in Graves disease and were certainly not negative in results, but on the con-

trary they resulted in quite pronounced exaggeration of the symptoms of that disease, a part of which is in accord with the theory which considered Graves disease to be a structural and functional hypertrophy of the thyroid gland, a theory which finds still further corroboration in the favorable results which have been achieved in these cases by the partial removal of the enlarged gland.

In giving this remedy by injection special precautions were, of course necessary, owing to the liability of abscesses, occurrence of pain, nausea and other septic symptoms, and consequently it was with gratitude that two years afterward we were enabled to put on record a still further advance in the treatment of this disease, as it was then found that the gland in a fresh condition could be given by the mouth with equal advantage.

This action was rather unexpected but it is true, and a physiological fact, that this gland in any form whatever can be administered by the stomach with the desired effect, and, as can be said of none of the other extracts of glands or tissues that I know of, without in the least degree losing any of its efficiency, although it is of course in this way subjected to the action of the gastric juice.

As the safety of this form of administering the thyroid gland of *healthy* animals is entirely unquestioned it is deservedly the favorite, but as its administration in its raw condition was often attended with much nausea and always with a great deal of disgust, the pharmacist has been called to our assistance, and we now have several different preparations of this gland, all of which seem to be satisfactory in their action. Tabloids are used quite extensively in England and to a certain extent in this country. Several of the establishments here are now making preparations of the dessicated gland, and also a powdered extract which is probably the same.

As a rule this remedy may be used with freedom, nevertheless it will be well to remember that its excessive use has in a few cases been followed by unexpected and disastrous results, consequently it is well in giving it to begin with quite moderate doses, gradually increasing in quantity as may be found necessary.

The extract of the supra-renal capsules has been used in quite a number of cases of Addison's disease, because, as before stated, it was clearly shown that the removal of these bodies produced symptoms similar to those pertaining to that

disease. Dr. Shoemaker, of Philadelphia, has reported a case of Addison's disease in which the extract of the supra-renal capsules was used and great benefit was derived from its use. The results, however, from these experiments have not as yet been as satisfactory as we could desire.

The marrow of bones is an organ in which the red blood corpuscles are said to be formed. Pernicious anemia and leucocythemia are two diseases which have usually, if not always a fatal termination and present as a principal symptom a deficiency of the red blood corpuscles. Therefore it was thought that the use of the marrow of bone in these diseases ought to produce beneficial results and during the past year quite a number of apparent cures, both rapid and complete, have been reported as the results of the use of this remedy in these diseases. Time will tell us whether these cures are permanent or not.

The removal of pancreas produced symptoms characteristic of diabetes, and, as in the other cases, if a portion of the gland was left, or if grafting took place successfully, these symptoms either did not occur, or disappeared, the extract of this organ was given hypodermically, with a view of ascertaining its effects in diabetes, and while some of the investigators, notably Brown-Sequard, have claimed to have secured very favorable results from its use, these have been offset by so many reports of a negative character that we are obliged to await further investigations before we can arrive at any definite conclusions on this particular subject. But certainly enough has been accomplished in this direction to warrant us in indulging in the hope that ultimately we may be successful in our efforts to mitigate the sufferings, and at least prolong the lives of those suffering from this hitherto incurable disease, by the use of the special extracts of this organ.

(To be continued.)

Alumni Department.

JOHN MILTON DODSON, A. M., M. D., EDITOR.

MEMBERSHIP IN THE ALUMNI ASSOCIATION OF RUSH MEDICAL COLLEGE is obtainable at any time by graduates of the College, providing they are in good standing in the profession, and shall pay the annual dues, \$1.00. This fee includes a subscription to THE CORPUSCLE for the current year. This journal is the official organ of the Association.

Dues and all communications relating to the Association should be sent to

JOHN EDWIN RHODES, M.D., Sec'y and Treas., 34 Washington St., Chicago

'51—Dr. S. R. Mason, one of the "old timers," is at Devall's Bluff, Arkansas.

'58—Dr. L. D. Smedley, Nashua, Iowa, writes: "Last year you classified me as one of the Patriarchs, Well, Well! What will you do for a specimen of 'minor prophets.' Perhaps the following case may be of interest and worth repeating. A multipara felt so hopeful that she decided to dispense with a doctor. The nurse (an old French lady) was eager to say she believed in *helping*(?) By her *help* the case was delayed until I was called. I found a roomy pelvis and the vertex being held under the pubic arch by the nurse drawing on the forehead. I simply gave proper direction to the vertex and delivery was completed with the next pain. Then I got a new idea in therapeutics. The nurse compelled the patient to hold a little salt in each palm, to cause speedy delivery of the placenta, which was already in the vagina."

'62—Dr. G. W. Begg, of Sioux City, Ia., has been enjoying a vacation of some weeks duration.

'66—Dr. Albert Harris Hoy has recently removed to 584 Dearborn St. Chicago, Ill.

'69—DWIGHT, ILL., August 27th, 1895. "Eternal existence to Rush on the broad plan of liberal and higher education

I feel that I would be willing to do penance the next twenty-six years of my existence, should I live that long, could I impress upon medical students and young practitioners the necessity of a thorough knowledge of anatomy, physiology and chemistry as a basis of medical education and successful prosecution of work as a practitioner, as it has been thoroughly impressed upon me

in the twenty-six years that I have practiced medicine since I graduated from Rush."

Most kindly yours,

R. BROUGHTON, Class, '69.

'70—Dr. L. L. Bond, an enthusiastic alumnus of Rush, has been in practice at Westside, Iowa, for many years.

'71—"I graduated at Rush, in 1871 and consider it one of the most honorable years of my existence. I listened to the able lectures of those noted men as Freer, Allen, Ingalls, Miller, Gunn, Powell, Rea, Ross, Lyman etc., and have always been proud of the distinction and welcome THE CORPUSCLE in its monthly visits."

GEO. W. BRANDON, M. D., Milford, Neb.

'73—"Ever glad to affirm my allegiance and love for "Old Rush."

C. H. HAMILTON, M. D., Dubuque, Iowa.

'76—Dr. Jacob May, Bridgeport, Conn., gave us a pleasant call Sept. 7. The doctor is the only Rush man in that vicinity. He still thinks of the old boys he knew so well "lang syne," and speaks with the enthusiasm of a recent alumnus of his Alma Mater. The doctor has been obliged to retire from active practice, but keeps up his interest in things medical.

'78—"I graduated in 1878, and came to this place at that time. I cherish the name of "old Rush," and hope still to visit and embrace the good things there so long as I live."

A. F. BURNHAM, M. D., Ashland, Ill.

'72—Dr. Jas. McMorris located at Belle Plaine, Ia., graduated with the class that was purified by passing through the great Chicago fire."

'84—Lyman L. Uhls, formerly of Genda Springs, Kans., has been appointed physician at the Kansas State Asylum, Osawatomie, Kans.

'82—Dr. F. M. Johnston is at Dover, Minn.

'85—"THE CORPUSCLE improves steadily and I think every son of "Rush" is proud of his Alma Mater.

GEO. DEACON, Pasadena, Cal.

'86—Dr. Frank Fitzgerald is at Monson, Ill.

'87—"I am growing prouder of 'old Rush' every year. She is certainly an *Alma Mater* worthy of the name. Please send THE CORPUSCLE for another year. I couldn't think of doing without it."

J. E. CAVEY, M. D., Lexington, Ill.

'81—"I am in love and sympathy with 'old Rush,' and want to see her continue to lead the world."

J. A. SHIECK, M. D., Cameron, Ill.



LUDVIG HEKTOEN, A. B., M. D.

The Corpuscle.

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MEDICAL DEPARTMENT LAKE FOREST UNIVERSITY.

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RUBY RED AND BLACK: Colors of Lake Forest University. ORANGE: Color of Rush Medical College.

EDITORIAL.

We take great pleasure in presenting, this month, the likeness of Dr. Ludvig Hektoen, together with an article from him outlining the work in the several laboratories in the college, which he has in charge.

As the doctor is a comparative stranger to most of the students and Alumni of the college, except by reputation, we take the liberty of making personal mention of him as an introductory.

He is a comparatively young man, being but a little over thirty; and of that peculiar genial yet dignified manner which wins favor for him on all hands, yet forces an appreciation of the importance of the work in hand to the exclusion of all else—in other words he is himself a thorough and energetic student and expects the same from his disciples.

He received his degree of B. A. from Luther College, De-

corah, Iowa, afterwards attending one year at the University of Wisconsin. He received his degree of Doctor of Medicine from the College of Physicians and Surgeons, this city.

Immediately following his graduation from the latter institution he was for one year Assistant Physician at Kankakee Insane Asylum, and later Interne and Pathologist for eighteen months at Cook County Hospital. He still holds the position of Pathologist at this hospital.

He has also occupied chairs in the spring faculty of Rush, and in the regular faculty of the college of Physicians and Surgeons.

In his continental tour some time since he studied at Upsala, and Stockholm, Sweden; Berlin and Prague, returning to his present post thoroughly equipped and capable of excellent work.

In the accession of Dr. Hektoen as director of the microscopic laboratories the college may well feel proud, for he is not only a gentleman of excellent accomplishments, but as well a man of great promise, and in the prosecution of his work we wish him well, and in behalf of students and Alumni welcome him to our Alma Mater.

With the recent death of Professor Louis Pasteur, the eminent bacteriologist, the medical profession has lost one of its brightest ornaments. His life has been one of arduous devotion to science and no task seemed to be too hard for him to surmount.

“While the general public are conscious of the irreparable loss which science and humanity have sustained in his death, its conception of the practical utilitarian value of his remarkable discoveries and their relation to human life is doubtless confined to a few more or less vague abstractions. Any adequate comprehension of the results of his experiments in the field of preventative and restrictive bacteriology is only possible by reference to the manner in which his theories and discoveries have been applied in the amelioration of the ills that are supposed to result from the presence in the blood of micro-organisms.

“The discovery of the causes of fermentation, the successful application of his discoveries in the cure of the silkworm disease and in the cure of hydrophobia, whether a real or imaginary disease, are incidents in the scientific researches of the eminent French scholar with which the general public are quite familiar. But by far the most transcendent results of Pasteur’s investigations in the field of bacteriology is the antitoxin treatment of diphtheria. While Pasteur was not the real discoverer of antitoxin, he was the pioneer bacteriologist who blazed the way for Roux and Behring and Nutthal, and it was only through his patient and laborious researches that the discovery and use of the diphtheria antitoxin serum were made possible.”

The prospect for an unusually good year at the college are very flattering. The matriculation, contrary to expectation, is equal to that of any preceding year to the same time, and it is quite evident that there will be fully as large an enrollment as ever.

The regular work has started off quite happily and although little more than a week has passed since the opening of the session all is in order and moving regularly.

Extension of course and stricter requirements are readily noted in running over the new schedule, hours that were once vacant are now filled by clinic, recitation or laboratory work. All of which meets with the approval of those interested in the college and the improvement of medical education.

THE STUDY OF PATHOLOGY.

BY LUDVIG HEKTOEN, A. B., M. D

PROFESSOR OF MORBID ANATOMY.

The following brief remarks concern *Pathology*—its position in the curriculum of medical study, its fundamental importance and the methods of its teaching.

“The study of disease as a province of scientific knowledge is called *Pathology*.” Current usage of the word *Pathology* limits its meaning, as generally understood by teachers and students, to the scientific study of the causes, the nature and the anatomic changes or manifestations of disease; the study of the clinical phenomena and of the treatment of disease, belonging more particularly to *Practical Medicine* and *Surgery* and their numerous specialties.

The province of study thus indicated by the term *Pathology* is divided into two important and distinct departments, namely *General Pathology* and *Pathologic Anatomy*. According to the best recent writers *General Pathology* is made to include the study and the investigation into the causes, the nature and the course of morbid processes in general. It studies especially the various conditions and factors that are common to a greater or smaller number of diseases as, for instance, fever, inflammation, progressive and retrogressive disturbances of nutrition, circulatory disturbances in general, as well as the parasitic and other causes of disease and their mode of operation.

General Pathology treats, therefore, not only of the morbid changes that may be present in the various tissues and organs of the body as the result of disease, but it aims to bring the student to the very bottom of the accumulated knowledge concerning pathologic processes by studying their etiology and their nature as well as their morbid anatomy and histology. Thus *General Pathology* discusses inflammation as a whole both as regards its various causes, its genesis and nature, its various forms as well as the microscopic and other changes it brings about in the tissues and organs, but this discussion is a comprehensive and general one and is not circumscribed or limited by the facts and conditions presented by the inflammatory changes of any single organ. The important subject of tumors, to add another illustration, is taken up in the same way

and an attempt is made to approach the solution of the question of their origin by investigating their genesis, their biology, and their structure.

The scope of *General Pathology* is well illustrated by noting the various subdivisions into which the author of a recent and popular text-book divides his field. After an introductory, general discussion of the various causes, the mode of development, and the nature and course of diseases, including the modes of healing, immunity and similar profoundly interesting topics, he further considers his subject in a systematic manner under the following headings:

I. The Disturbances of the Circulation of the Blood and the Lymph.

II. The Retrogressive Disturbances of Nutrition and the Infiltrations.

III. Hypertrophy and Regeneration of Tissue and of Organs.

IV. Inflammation and the Consecutive Processes of Repair.

V. Tumors.

VI. The Disturbances of Development and the Resulting Malformations and Anomalies.

VII. The Parasitic Bacteria and other Vegetable Organisms and the Diseases they cause.

VIII. The Animal Parasites.

On account of the fundamental nature of *General Pathology*—it being an essential part of the groundwork of the *Science of Medicine*—it is frequently included, especially in American and English medical literature, under the term: *Principles of Medicine* or *Principles of Surgery*, but there is no essential difference between *Medical* and *Surgical Pathology* although certain subjects of *General Pathology* may have especial relations to either the one or the other of these departments of *Medicine*.

Pathologic anatomy, on the other hand, describes the morbid changes peculiar to individual diseases. The study of the gross lesions is spoken of as *Gross Morbid Anatomy* and the study of the minute, microscopic changes as *Pathologic Histology*. In order to recognize and understand satisfactorily the gross lesions of an organ, such as the kidney for instance, it is necessary to be familiar with the gross appearances as to size, color, consistence and other points of the normal organ; and in order to observe intelligently the different microscopic changes, that may be present, it is necessary to have studied carefully the normal histology of the organ in question and also to have

such general pathologic knowledge as to be able to comprehend the nature of the morbid process present. At the present time pathologists and medical men in general are not satisfied with reaching some conclusion as to the morphologic nature of the lesions they study—whether inflammation or degeneration for instance—but, recognizing the lesions, that is, the morbid changes as the result of disease, they aim to establish the exact etiologic factor or factors at work and this frequently necessitates a bacteriologic and chemic examination as well as an anatomic and a histologic.

A systematic treatise of *Pathologic Anatomy* considers the gross and the microscopic morbid anatomic changes that may occur in each tissue or organ according to the general scheme presented as indicating somewhat accurately the scope of a part at least of *General Pathology*. Thus the morbid anatomy of the heart, for instance, would be systematically described according to the following plan:

- I. Malformations and Anomalies.
- II. Circulatory Disturbances.
- III. Retrogressive Changes.
- IV. Hypertrophy and Progressive Changes.
- V. Inflammation and its Consequences.
- VI. Tumors.
- VII. Parasitic Diseases (not already included under inflammations.)

From what little has been said the thoughtful student will no doubt have had his attention arrested by the fact that a thorough knowledge of *General Pathology* and *Pathologic Anatomy* must be and are absolutely requisite for the correct and satisfactory understanding and interpretation of the abnormal manifestations of life that the physician meets with at the bedside. And it is in full accordance with such a view that in the curriculum of medical instruction as arranged at the present time *General Pathology* and *Pathologic Anatomy* are placed among the the so-called propedeutics, or preliminary studies, preparatory to the taking of the clinical and practical branches.

The successful teaching of *Pathology* requires an elaborate and expensive equipment. In addition to the time-honored didactic lecture, to systematic reading, and to recitations, abundant opportunities must be provided the student for practical laboratory work and demonstrations in *General Pathologic histology* and *Bacteriology*; instruction must be given in the methods of making post-mortem examinations and in the diagnosis of

Gross and Microscopic Pathologic Anatomy This means well furnished laboratories; large hospitals and clinics; capable, conscientious instructors. Grant that such opportunities are available, what can the student himself do to reap commensurate benefits? He should from the very first lay chief stress upon being thorough and conscientious in all the details of his work in this branch. He should cultivate the profitable and time-saving habit of being neat, cleanly, systematic and orderly in everything appertaining to his laboratory work. He should not rest content until he understands fully the exact and precise reason for every detail in the laboratory technic that he employs.

In the study of his specimens in *Bacteriology* and in *Pathologic Histology* he must exercise a minute and critical observation; it is not wise to be satisfied by hearing what he is informed that he sees—he should not abandon or postpone the study of a single specimen until he has mastered the exact significance of all the little details presented, and he should round out the ideas and information acquired from the explanation of his instructor and from his own observation by the careful study of recognized authoritative books. He must not yield to the temptation to believe that the memorizing of the dogmatic assertions of the quiz-compend is a short-cut to knowledge of *Pathology*.

Careful, written descriptions of microscopic appearances accompanied with exact drawings, are of the greatest possible value to the student. Such practices are conducive to intelligent observation, leads to self-criticism, and to the formation of correct literary habits.

Demonstrations in *Gross Morbid Anatomy* afford splendid opportunities for deliberate and critical observation, and the student must determine for himself varying shades of color and different degrees of consistence. The question which the student invariably should ask himself at post-mortem examinations and demonstrations should be this: Does this heart, or this lung, or this kidney differ from the normal, and, if so, wherein is the difference? A truthful answer to this question contains in itself the essential elements necessary to formation of the anatomic diagnosis. Here again the student ought never to feel content with hearing the diagnosis announced but should make it his especial and urgent business to fully comprehend all the various reasons and appearances that lead to the final conclusion expressed by the diagnosis. Only by so doing can the methods

of correct observation and sound reasoning be acquired that are necessary for the development of reliable, independent investigators. The student should practice the objective, unbiased and systematic description of gross appearances and keep a protocol of his own of all the post-mortem examinations he attends; this sharpens observation and thoroughness and makes one familiar with the use of scientific language. As far as possible the student should criticise the clinical diagnosis in the light of the anatomic findings, and increase and correct his personal observations and conclusions by the reading of appropriate sections in standard works on *Pathologic Anatomy*, *General Medicine* and *Surgery* before time is allowed to diminish his interest in the questions raised at each autopsy.

The student should enter upon the study of *Pathology* fully impressed with the importance of the subject. The thorough study of *Pathology* will not only materially lighten the work in the practical branches of his course of study, but it will also form an essential part of the foundation upon which each student hopes to build a successful and creditable career as a practitioner of *Medicine*.

The physician whose thinking and doing is guided by the principles of sound *Pathology* not only evades the chilling influence of the routine of drudgery he otherwise is sure to fall a victim to in his arduous practical work, but he acquires a higher and nobler interest in his calling than the purely material which reaches no further than the item of dollars and cents.

SOME SUGGESTIONS ON THE TREATMENT OF LOCOMOTOR ATAXIA.

BY D. R. BROWER, M. D.

The prognosis in locomotor ataxia is frequently too gloomy, for my experience teaches me that some cases of locomotor ataxia may be cured and some cases can have the rate of progression considerably impeded.

If the disease is recognized in the pre-ataxic stage, and it should be more frequently than it is, then rest, for the space of at least three months, should be the foundation of the treatment. This prolonged rest should have its bad results guarded against by the methods that have been plainly taught us by Dr. Weir Mitchell. It should be rest with massage and faradic exercise of the muscles daily. If the disease has a clearly de-

finer syphilitic history, and especially if the patient has not been thoroughly treated by anti-syphilitic remedies, iodide of potassium and mercury should be administered freely. The iodide of potassium should be given in as large doses as the stomach of the patient can be induced to tolerate, remembering that the toleration of this drug can be increased by administering it either in alkaline effervescing solutions, or in milk. In addition to the iodide of potassium and mercury in the pre ataxic stage, I think it is wise to administer the fluid extract of ergot in full doses, about a drachm, three times a day, if the stomach will tolerate it, for at least thirty days. Galvanism to the head and spine, using from three to five milliamperes for the head, and ten to fifteen for the spine. In connection with this the faradic brush should be used over the entire surface of the body. The galvanism to the spine can in some cases be beneficially replaced by the use of cupping and the actual cautery. In the treatment of these patients it is my practice to use successively these three methods, a course of galvanism for one month, a course of cupping for one month, and the use of the actual cautery every second or third day for another month. For the paroxysms of intense pain that are of so frequent occurrence, I know of nothing better than the hypodermic injections of morphia, although occasionally full doses of codeine, or of antipyrine, and sometimes the salicylate of soda seem to relieve the pain just as well as the use of morphia. During this treatment the digestive organs should be carefully guarded. The food should be abundant, nutritious, and easily digestible. The use of alcohol exceedingly moderate, and sexual intercourse must be prohibited. The patient should be protected against atmospheric changes.

If the patient is first seen in a more advanced stage, even then a moderate amount of rest is sometimes of service, or a modified rest treatment where it is not practicable to use absolute rest for this space of time, is valuable. Modified rest consists in having the patient retire to bed as early as possible in the evening, have him remain in bed as long as possible in the morning, and then at mid-day to assume the recumbent posture for at least one hour. As far as it is practicable, I advise patients to place in their offices a lounge, so that they may during the day, from time to time, as the demands of their business will permit, spend a few moments in the recumbent posture.

When the stage of inco-ordination has been reached, ergot

is called for only when the disease from time to time shows a tendency to rapidly progress, then the free administration will sometimes prevent this progression. In this stage of inco-ordination my experience has taught me that suspension is of service. I advise suspension three times a week. It is most conveniently done by placing the patient in a chair in the sitting posture and so adjusting the suspension apparatus that there will be an equal distribution of the extension between head and axillæ. If the counterpoise is a box in which weights of different sizes, as may be necessary according to the weight of the patient, are placed, then the whole is under the exact control of the attendant. This suspension may be from five to fifteen minutes, depending upon the effects upon the patient. I think it should be continued as long as possible.

I am very well aware that eminent physicians have reached the conclusion that suspension is of no benefit, but my own conclusions are to the contrary. I have therefore read with pleasure the paper by Professor W. V. Bechterew "On the Influence of Suspensions on the Visual Derangement in Affections of the Spinal Cord."*

The conclusions of this admirable and exhaustive paper are that there is no doubt that suspension exerts a most beneficial influence on vision of these patients, even when there is no organic trouble in the eye itself. If on vision why not on other symptoms?

I advise in this stage of the disease the hypodermic injection of the chloride of gold and sodium, giving a daily dose of one tenth to one twelfth of a grain for a month, and then continuing it every other day hypodermically for six or eight months, and at the same time administering as a tonic the phosphide of zinc alternately with some preparation of arsenic, preferring for the purpose the arseniate of sodium in about the one twentieth of a grain dose. In addition to the internal administration, I advise galvanism, as before mentioned, applied to the head and spine; the electric brush with the faradic current to the periphery, and alternately as before with the galvanism the use of some form of counter-irritation either as blisters, the actual cautery, or dry cupping.

I have seen no benefit from the internal administration of the ammonium chloride, or the nitrate of silver or any other preparation of silver.

Patients should be instructed to guard themselves against

* Neurologisches Centralblatt, April, 1893.

excessive mental work, over-anxiety, and physical fatigue. They should carefully avoid exposure to cold, and, if possible, the winters should be spent in a warm, dry climate. The digestive organs should be kept in order. Food should be carefully regulated, and alcoholic and sexual excesses positively avoided.

Cold bathing is of benefit to these patients. Hot baths are positively contra-indicated. I have frequently seen disastrous consequences follow treatment at the various hot springs of the country. But cold bathing, or bathing with water of an indifferent temperature, I recommend. I advise patients to have the spine showered with moderately cold water every day.

The pains of the second stage of locomotor ataxia are to be met by precisely the same agent or agents, and morphia is undoubtedly the most successful; but phenacetine, antipyrine, acetanilid, codeine, extract of cannabis indica, salicylate of sodium, sometimes answer the purpose better than the morphia.

These ataxic patients can be taught to regain some of their co-ordinate control by proper training. They can be taught the practice of standing with their feet close together, and with the eyes closed, by persevering daily practice. If a patient stands in a bath-tub while making this practice and has cold water poured upon the spine, I think he will more speedily regain this co-ordinating control. They can also very much improve their locomotion by earnest and faithful effort at control.

The bladder needs attention often in the second stage of the disease. Unless care is exercised, not infrequently a cystitis develops that lays the foundation for an inflammation of the kidneys. The urine, therefore, should be from time to time examined. If it is alkaline, then the bladder is not perfectly emptied in the act of urination, and the patient should be catheterized from time to time. The bladder should be washed out with some antiseptic solution, and if there is the beginning of a cystitis the internal administration of salol or boracic acid will be of service; these remedies being eliminated largely by the urine will exercise their antiseptic influence upon the bladder and thereby very materially benefit the vesical symptoms. The gastric crises that occur at this time are very distressing. I know no better way of stopping them than by the hypodermic use of a combination of morphia and atropia. The laryngeal spasms that sometimes occur at this time, as a rule

will yield to inhalations of nitrite of amyl, or the internal administration of nitro-glycerine.

In the third stage of the disease when, as is frequently the case, associated territories of the spinal cord, the anterior horns, and sometimes the lateral columns become involved, much can be done towards adding to the comfort of the patients and prolonging their lives by the judicious use of tonics such as phosphide of zinc and the arseniate of sodium as well as by the continued use of galvanism to the spine and faradism to the surface, by attention to the digestive organs, to the bowels and bladder, by placing them in such surroundings as will free them from fret and worry and from exposure to sudden changes of temperature.

I have had but little experience with injections of spermine, cerebrine and other animal products, as advised by Brown Sequard and endorsed by other observers, and this experience has been unfavorable. Yet they may demand further trial.

Dr. E. Ingals, of this city, has related to me a case of locomotor ataxia that occurred in his practice, that recovered after using an infusion of *cataria vulgaris* or the common catnip, in large quantities, for several months with entire relaxation from business cares.

MULTIPLE FIBROMATA OF THE SKIN.

(A case with two illustrations.)

BY T. J. CREEL, Angola, Ind. Class. 93.

W. H—, American born, age 69, laborer, applied to me a few months ago for the relief of a troublesome intense pruritis which had lasted some time. On examination I found the skin literally covered with small tumors, varying in size from a grain of wheat to that of a walnut. The skin of the face and scalp were well covered with small tumors, while the anterior and posterior surfaces of the trunk are well covered with larger ones interspersed with the smaller, as you can see by the accompanying photographs. The extremities also share in the disorder, but not to so great an extent as the other parts of the body.

The tumors vary very much in form, consistency and color. Some being roundish, semi-solid or elastic, others being dense, hard and unyielding structures covered with a reddish skin, and some traversed by numerous blood vessels, giving

the tumor a bluish appearance. As to location, some, espe-



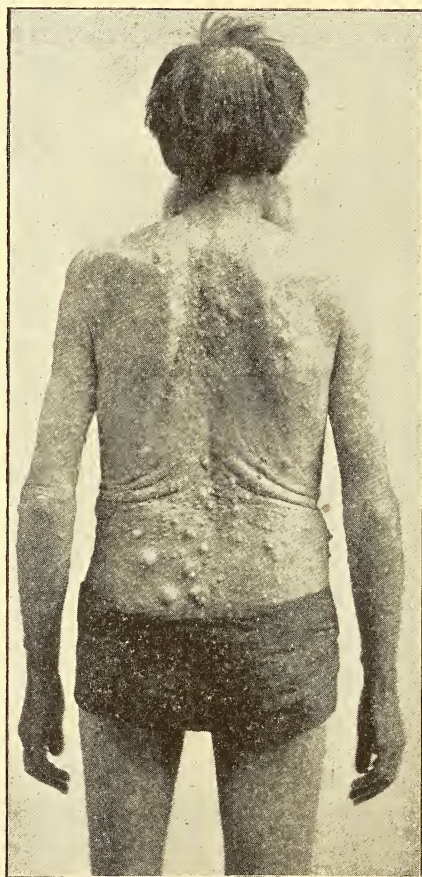
cially the smaller ones, are circumscribed nodules in or beneath the skin. The larger ones are sessile, markedly pedunculated or pendulous. One or two are ulcerating, which, the patient tells me, a few of them do from time to time.

The old gentleman relates that the first appearances of the lesion dates from his recovery from a severe attack of measles in boyhood. Whether or not this had anything to do with its origin I am not prepared to say. There is no history of any trouble of the same kind in any other members of his family which would preclude any hereditary taint.

A point especially called attention to by "Hebra" may be noticed in this case, viz: a deficiency in the physical and mental organization of the individual.

Another feature in this case is the intense itching he experi-

ences at times, feeling, he says, like tearing his skin in shreds. This, it seems to me, might lead to the belief that neuromatous tumors were also present



The patient tells me that the tumors have been increasing in size and numbers quite steadily of late.

I do not report this case from anything remarkable in regard to it, but from its seeming rarity and in the hope that it may be of some interest to the alumni and students of "Old Rush."

METHODS OF INSTRUCTION.

BY PROF. J. H. SALISBURY, A. M., M. D.

An address delivered before the Instructor's Association.

It is the privilege of the present generation of medical men to witness not only a remarkable revolution in the methods and results of practice in our profession, but a transformation almost complete in the methods of instruction. The course has expanded from two short series of lectures to four years of hard and varied work. Laboratory instruction, manual training, clinical observation, and, lastly, systematic recitation work have been added to the time-honored didactic lectures. New subjects as well as new methods have been introduced. Various specialties clamor for recognition. Subsidiary sciences become, year after year, more variously applied to the art of diagnosis or of therapeutics. The result of these changes is the addition to the faculty of the medical college of a large body of instructors. It is for the better equipment and more harmonious working of this body of men in Rush Medical college that we are met to night to devise means. This association has a large field which is comparatively untilled. It has been deemed best by the committee who prepared the program for this meeting to spend no time in talking about what we are going to do, but to proceed to do it.

The one great object of our association is to bring the methods of instruction to the highest degree of efficiency. The one great means of doing this is the interchange of ideas and experience upon the best methods of prosecuting our work.

I invite your attention for a few moments to some thoughts upon methods of teaching and recitations.

The instructor should have clearly in view the objects of his work. These are:

1st. To secure on the part of the student as great an accumulation of medical knowledge as possible.

2d. To train the student in the methods of thought and reasoning peculiar to medicine.

3d. To estimate the student's progress with a view to proper grading.

The accumulation of knowledge is of the first importance, for without a proper amount of knowledge the methods of reasoning cannot be properly set forth. How can this be best accomplished?

1st. By inspiring the enthusiasm of the student. The student ought to be made to feel that the recitation is of importance to him because it has a bearing on his future work. For this reason every instructor in a medical college should be a physician, and should either be engaged in active practice or thoroughly conversant from some source with the exigencies of practice. Especially should it be the duty of the teacher of the primary or the fundamental branches, anatomy, physiology, chemistry, etc., to impress upon the student the intimate relation which the facts which he is studying bear to the practice of medicine. These efforts of the primary instructor should be re-enforced by a reciprocal action on the part of the teacher of the practical branches, in pointing out the underlying facts in considering the various methods of practice. The methods of stimulating enthusiasm must vary with the individual, and it would lead us too far to attempt to analyze the genius for teaching into its elements.

2d. Important facts should be emphasized. The text book, in its effort to present a complete account of the subject, is very apt to leave the impression on the mind of the student that all its facts are equally important. It is like a picture without perspective. Half a dozen tests for chlorides are given in Simon's chemistry. In practice, in the vast majority of cases, only one is used. Among the numerous symptoms which may occur in a given disease the characteristic ones are apt to lose their relative importance. It should be the task of the instructor to bring out clearly the important facts so that the student may be able to form them into a picture with bold outlines which will not soon fade from his memory.

3d. Facts should be classified. This is a powerful aid to the memory. The chemistry of the non-metals may be held in memory with little effort by grouping the elements according to their valence, and arranging them in the order of their atomic weights. If the student can be led to make his own classification, valuable mental discipline will be at the same time secured.

4th. The student should be led to apply the facts learned, to correlate and associate them with facts learned from other sources. To make them a part of his own mental furnishing

The facts should be so worked over that they are ready in the mind to suggest themselves when suggestion arises. The frequent mistakes of physicians in overlooking arsenical or other poisoning, are due to the fact that the idea of poisoning has not suggested itself. Had their medical instruction made the possibility of poisoning a fact in close relation with other medical matters, it would naturally have suggested itself in connection with cases which present such symptoms. The medical student ought to be required to frequently apply his knowledge as he would in the consideration of an actual case. This is, of course, the especial province of clinical instruction, but it finds its place also in the recitation room. I have noticed that students who seemed well prepared, if called on to recite in the order of the book were much at a loss to correlate their knowledge when an imaginary case was presented to them.

5th. Review. A certain high school principal advocates the theory that one never forgets a thing once thoroughly learned. However this may be, the knowledge which to-day seems perfect will fade from the memory unless recalled from time to time.

And in medicine, more than in other sciences and arts, the only knowledge of value is present permanent available knowledge. What we knew last year, but have forgotten, will not help us in the treatment of disease. The student can never succeed in his profession on the credit of his freshman examinations.

Shall the instructor present other theories, or give other instruction, than that given in the text book?

In my opinion, while the instructor ought by no means to be slavishly dependent upon the book, and should feel himself to some extent master of the subject, he should guard against setting himself in opposition to the book, and should seldom go outside of the topics set down or introduce the discussion of unsettled points. But, while this should be the rule, I think that there is no better means of training in the methods of medical reasoning than the discussion of medical theories.

Among the minor questions which are raised in regard to this subject, is the relative advantages of calling on many students in a recitation, asking each one questions or quizzing a few students and asking each many questions. I will not attempt to answer this definitely. I believe both methods must at times be followed in order to give all the students a fair

chance and maintain interest. With the ideal student the preferable way would be to call one student for the development of each phase of a subject and endeavor, by judicious remarks and questions, to lead him to put the subject in such shape that other students would also gain a definite and valuable conception. But with some students this is impossible. Their processes of thought are too slow and incoherent for any teacher to make use of for the instruction of the class. While these should have a fair share of mental drill and necessary explanations, it would be a waste of time and an injury to the class to attempt to do more. In our classes the necessity of maintaining order will sometimes compel the teacher to question briefly, passing rapidly from one topic to another, and from student to student. Lack of time may sometimes require the same thing, but, in general, I believe it better to leave part of the lesson unrecited than to hurry over the whole. A part of the time should be given to leisurely instruction, *i. e.*, the building up of definite and correct ideas in the mind.

It should be clearly in the mind of both instructor and student, that the student is not only to accumulate facts but he must also be trained to judge correctly with regard to those facts. Facts are the basis of medical judgments, without which we can do nothing. But the facts are also impotent for good unless they are correlated and applied by a trained judgment. This training should begin at the beginning of the course. The application of chemical tests, for instance, although in many cases of no practical use to the physician, may be made a good means of training the reasoning power. The student is slow to see why barium chloride is not a sufficient test for sulphates. Nor will his judgment be much improved if he is simply told that he must add an acid. He needs to be brought to see how the addition of the acid precludes the possibility of the precipitate being any other than barium sulphate. Similarly in the discussion of antidotes, the students will often suggest remedies which, although chemically antidotal, would kill the patient perhaps more effectually than the poison itself.

Here is opportunity for the use of judgment. Again, in the choice of remedies the same opportunity arises. When the student tells us that he would use a certain remedy for a disease, he probably repeats a statement learned from the book which one of the laity could learn as well. But when asked to say why he selected that remedy rather than others, he has a

chance to exercise his judgment in consideration of the relations borne by the remedy in question to facts previously learned—facts of physiology, chemistry, pathology, etc.

Undoubtedly the most delicate and difficult task of the instructor, is the correct grading of the progress and ability of the student.

In the ordinary work of instruction the teacher can feel that his sympathies are with the student, and that they are working together for a common end. But in grading the associate and helper becomes transformed into the judge. How can these two attitudes of mind be compatible with each other? Must not the instructor, instead of being, as he ought, a builder, seek rather to tear to pieces the fabric of thought, in order to expose the errors of the student? If he does not do this will he not become a too complaisant friend, putting down a high mark for a recitation that has evinced little knowledge?

I believe it would be better if the instructor and examiner were different persons. If we could have some system by which the daily work of a class could be submitted to the rigid test of examination by a disinterested party; if, for instance, once a week each student might be required to answer in writing one question, which should be submitted to a fellow instructor for grading, would not an advantage be gained? I do not suggest this from any love of written examinations, or of marking papers, but as a possible solution of an obvious difficulty.

In regard to the marking of examination papers, we meet several questions of interest. How shall we best insure impartiality? Several instructors mark papers written on the same set of questions. Their grading will differ according as one or the other has given the greater weights to certain errors.

It is obvious that no perfectly uniform method can be devised, but it is in the interest of fairness to ask ourselves the question, how can the inequality arising from varying estimates upon the same question be avoided? One method is for the instructors in the same departments to meet together and determine what weight shall be given to the errors most likely to arise.

One very serious question confronts the instructors and faculty of this college.:

How shall dishonesty on the part of the students be suppressed?

This would seem to be an evil following everywhere in the

wake of written examinations, as plague used to follow the course of armies. And I would merely suggest that measures of moral sanitation will dispel this plague as physical sanitation has banished its physical counterpart.

Elevate the moral standard of the student and he will "cease ponying", even if he is not watched. If watched he may be shrewd enough to demonstrate that he is too many for us in more sense than one.

Nevertheless, I would not be understood to discountenance all repressive measures, but I will not attempt to make any suggestions on this subject.

Another question that has been suggested to me is whether in instruction we should give the student assistance or put him entirely on his own resources. This, it seems to me, is intimately connected with the other problem which I have tried to state, viz: whether we can at the same time teach and examine. If we are testing the student's knowledge we should not give help, but if we are teaching we can very properly do so in many cases.

I have endeavored to state a few of the problems that arise in regard to teaching by recitation. These few words will have served their purpose if they elicit the opinions of the members on these important questions.

EXTRACTS OF TISSUES AND GLANDS.

By L. C. WATERS, M. D., Chicago.

(Read at the Scientific Meeting of the Rush Medical College Alumni Association, May 22nd, 1895.)

(Continued from the September Number.)

The sensation produced by the publication, in 1889, of the communications of Brown-Sequard on the hypodermic injections of the extracts of the seminal glands, will be easily and distinctly remembered by most of us. Quite naturally the prevailing sentiment at that time was one of incredulity and even disgust. The claim of the chief advocate of this new mode of treatment consisted only in the statement that they had ascertained that the testicles of animals secreted a substance or principle which when prepared in a proper and aseptic manner and used hypodermically upon the human body, possessed marked tonic properties. Notwithstanding the immense amount of ridicule and adverse criticism which they encountered, these investigations were continued by the experimentors and while many failures were reported, success was the result in many other cases and quite a number of cures entirely unexpected were reported and improvement took place in many cases of disease which up to that time had been considered as incurable. So that many physicians adopted the treatment, but, as is so often the case, there was but little discrimination used in selecting the cases and in the use of the remedy, and the expectations had been raised to a high grade and disappointment was the inevitable result. The extracts were not always properly prepared and, as a result, septic symptoms appeared and disastrous and fatal cases were recorded. However there still remained some physicians who realized that there was really a considerable amount of truth in this idea and considered it at least worthy of future investigation, and by their efforts have at last placed this important discovery on a far more certain foundation.

I have thought it best not to enter into a detailed description of the testicular fluid as prepared and used by Brown-Sequard, nor its mode of preparation but speak more particularly of one of its active principles.

The liquid as recommended by Brown-Sequard is a very complicated mixture containing albuminoids, nuclein, lecethin, fats, cholesterine, keratin, keratinin, guarin, adenine and spermin and varies greatly in composition and strength according to the age and health of the animal, kind of animal, time of year, and many other factors. Owing to these facts it was reasonable to suppose that in these preparations, pathogenic products such as tox-albumin, toxic leucomaines, etc., might exist, and while we are reasonably certain that when the method of preparation of testicular extracts for hypodermic use, as recommended by D'Arsonure and used by Brown-Sequard, is employed, there is not very much danger in giving the preparation in that manner, beginning with small doses, the necessity of finding some yet safer method was fully realized and Prof. Pöehl, of St. Petersburg, inaugurated a series of experiments with a view of separating the active principles of this fluid from the other, and probably toxic, component parts. These experiments resulted in the advocacy of Prof. Pöehl of the use of spermin which he claimed was the active principle of the orchitic fluid, or at least the principle which accomplished all the good results obtained from the use of that fluid.

In 1878 the German chemist, Phillip Schraivig, as described in the *Annals of Chemistry and Pharmacology*, discovered a principle, which he called spermin, in the testicular juice which was afterwards found by Prof. Pöehl to be an organic base, having properties characteristic in their nature. It is found especially in the seminal glands and the other reproductive organs of animals, and is also found, although in a much less degree, in all the organs of the body and is also a factor of the blood. Spermin is one of the leucomaines and has the formula of C_2H_5N , and as before shown is one of the active principles of the orchitic fluid, and Prof. Pöehl advanced the idea that many diseases were caused by the diminution of this spermin in the system, thereby interfering to a greater or less extent with intra-organic oxidation in the human body.

There are two causes for the diminution of spermin in the human body, according to Prof. Pöehl.

First: The feeble production of this principle in the organism as the result of the absence of, or arrest of the function of, certain glands.

Second: The transformation of the spermin into its inactive form by means of disease.

This latter is by far the most frequent cause of this diminution. Spermin performs its duty only when it is in solution. The state in which it can be found in its insoluble, and therefore inactive, form in the organism is in a phosphate. This phosphate was found, by Prof. Charcot, as microscopical crystals in the blood of those suffering from leucocythemia, and, later, Leyden and Robin ascertained their presence in various diseases, pneumonia, bronchitis and other inflammatory affections, and they were always found as such when the intra-organic oxidation was diminished. The phosphate presents itself invariably in the amorphous state which is insoluble in water and serum and which after a time turns into three crystals.

This amorphous phosphate of spermin is formed by the addition of phosphoric acid to an alkaline solution of spermin. In the case of disease analogous conditions in the organism occur and this reaction probably takes place in the nervous tissues. It has been established by several investigators, Funk in particular, that when the nerve tissues are irritated from any cause, an acid condition or reaction occurs and a consequent diminution of the alkalinity of the blood. Phospho-glycerine acid is produced, and these conditions are favorable for the transforming of the soluble and consequently active spermin into the insoluble and consequently inactive phosphate. Not only is the diminution of the alkalinity of the blood due to irritation of the nervous tissues, but it may be due also to a lack of the proper amount of oxidation in the soft tissues as well. From this it will be easily understood how the amount of spermin in its active form will be greatly diminished in many diseases where the intra-organic oxidation is lessened in any way, and its presence in an insoluble state is sufficient reason why it does not exert its normal and necessary influence upon the body, and the conclusion was easily reached that favorable effects might be expected from the use of the hypodermic injection of soluble spermin. This has proved to be true in a large number of cases, particularly of the nervous system such as locomotor ataxia, spinal irritation, etc., and also in diseases of other organs, such as diabetis, etc., but it has been found that the action of this drug is considerably augmented by the use of alkaline remedies in connection with it, and the reason this action takes place is given above in discussing the reason for the diminution of spermin in the body.

Taking this physiological action of all these extracts into

consideration, for the most of them we can only say that we have to be content with the fact that they have in certain cases caused the abatement of symptoms in disease, but the exact physiological action is as yet unknown or at least has never been demonstrated. Probably the juice of the seminal gland has been more thoroughly experimented with from a physiological standpoint than any other, and in giving the results of those experiments those relating to spermin will be included. In the use of the injections of the orchitic fluid, and particularly in the use of the injections of spermin, we find that the nervous energy is greatly increased, the bowels are more free, there is greater activity in the promotion of oxidation, the ataxy decreases, the neuralgia disappears, the elimination of urea is usually increased, and the phosphoric acid in the urine is diminished. The night sweats of phthisis have generally disappeared and the sexual functions, as was reasonably to be expected, are greatly stimulated. Many of these results are probably due to the general improvement, but it is certain that they do take place and while none of these orchitic extracts are specifics for nervous troubles, they do constitute a nervous tonic of considerable efficacy in certain maladies characterized by loss of nerve power, and through this property they will be found to be a valuable addition to our older remedies with which they may often be used in conjunction.

In diseases where there is destruction or a damaged condition of the tissues or organs, the orchitic extracts are powerful helps to other remedies and forms of treatment, while strictly functional diseases of organs are greatly benefited by their use alone.

Sufficient reference has already been made to the therapeutic use and value of the extracts of some of the other organs of the body, such as the pancreas, &c., to show that their value is as yet largely conjectural, although quite a number of well authenticated cases of apparent good results are reported. There is one fact in this connection that is worthy of notice, and that is that in many cases of disease of other organs and tissues that the reproductive organs will yield more readily to the use of spermin than to any preparation of that special organ, as, for example, spermin has been used with good results in diabetes and also, I believe, in Addison's disease, when the pancreatic and supra-renal extracts prove useless.

In the use of Spermin, the most striking good results have been found in locomotor-ataxia. A very large number of cases

of which have been reported with marked improvement in over 90 per cent and a few cases of apparent cure. In hysteria and hysterio-epilepsy a large number of cures have occurred and few, if any, failures. All the cases of neurasthenia are greatly helped and some have been cured. In all I have been able to find, 665 reported cases of diseases of the nervous system such as the above and also including sciatica, paralysis agitatis, nocturnal emissions, hemiplegia, and spinal irritation, and of this large number not more than 8 per cent. have been recorded as failures. It is proper to say that this list includes many cases in which the orchitic fluid was used instead or spermin. The injections of these orchitic preparations have been used successfully in diabetes mellitus and scurvy, and cases of tuberculosis have shown great improvement. While in epilepsy the success has not been so marked as we should have liked, there have been symptoms of improvement in some cases, the large number have, however, been complete failures. Now in the light of these researches we are seemingly inevitably to the conclusion that these remedies are a powerful general tonic stimulating the tissues, and especially those of the nervous system, to greater activity although not combined in their effects to that particular system.

There are several ways of administering these remedies. It is certain that some of these remedies can be taken through the medium of the alimentary canal, and it is almost equally certain that others cannot. The thyroid preparations can be given in this way. The orchitic preparations cannot. All of them, I believe, can be given by the rectum in the form of suppositories or by liquid injection. This latter method is considered the better of the two, as absorption takes place more readily. Lastly we have the hypodermic method which is, of course, quicker in results, but, except in the spermin, attended with so much greater danger that when it is possible the other modes of administration are to be preferred and certainly should be tried first. So far as the testicle extracts are concerned, absorption takes place readily when the liquid preparations are used by rectum if the bowel is free and clean, and there is little danger of infection when this method is used. In the use of spermin probably the hypodermic method is the only proper one to use. It is practically unattended by any danger. It is prompt in its action and very much smaller doses are required than of the ordinary testicular fluid. When used it should be in small doses, gradually increasing until the maximum dose, which is

usually about 15 minims, is being taken. Results should be obtained in not less than one or more than four weeks.

Spermin and the ordinary testicular fluid has been given, I believe, by spraying it into the larynx and trachea and absorption has been immediate and results favorable, but it is not so easy to give it in this manner and it is hardly to be recommended.

I have purposely refrained from mentioning, until this time, a class of remedies alleged to be of the nature of those alluded to in this paper, but which savor altogether too much of the proprietary articles for us to place much confidence in, and which have been exceedingly disappointing in their results. I allude to such special preparations as cerebrin, cardin, medullin, etc., and refer to them now only for the purpose of condemning their use, under existing circumstances, as unscientific and entirely unprofessional.

In conclusion it is proper to say that these extracts of glands and tissues, which have been the subjects of this paper, have accomplished much good in relieving symptoms hitherto supposed to be such as would not be relieved, and whatever the final results may be, the immediate results are certainly such as to warrant still farther investigation, and also the hope that they will prove to be all that their most ardent advocates claim them to be.

THE CASE OF MADAME DE STAEL.

Always on the look-out for odd literature on the subject of medicine. I came, luckily, upon a few odd volumes of antique date with a great deal of antique description, by somewhat antique people, thinking these might be of some interest to the readers of THE CORPUSCLE, as well for their amusement as for scientific comparison between the old and the new in the practice of medicine, I have taken occasion to present in this article the case of dropsy which resulted in the death of a great woman. These volumes are of additional interest to me because herein I find discussions upholding or picking to pieces ideas and theories advanced by our own famous Dr. Rush, of whom I am a great admirer. The first case to strike my notice was that of Madame de Stael, daughter of the celebrated M. Necker, last minister to the unfortunate Louis XVI. This case was chronicled by her physician, the celebrated M. Portal.

“Madame de Stael, whose physician I had been from her

infancy, as well as that of her father, consulted me for an œdematous swelling in her legs with which she had been afflicted for some time. Her complexion, naturally dark, grew darker, her eyes assumed a yellow color, digestion painful, great restlessness in sleep which she had long been unable to relieve by the use of one or two grains of opium. Although about fifty-three, she had only recently ceased to menstruate.

I thought it necessary to prescribe aperatives, slightly diuretic pills, with medicinal soap. Extracts of *saponaria officinalis*, hops, gentian, in equal quantities mixed with bullock's gall. Four of these pills of four grains each were given in the morning, fasting, twice, an hour elapsing between them; and two cups of tisane made with the roots of the *rumex acutus* and *triticum repens*, with the leaves of *scolopendra* in which was infused a pinch of chervil and to which were added ten grains of the salt of nitre. This simple treatment in a few days diminished the œdema.

Having experienced light alvine evacuations and recollecting that she had sometime before been troubled with looseness, against which several tonics had been prescribed with effect, with a little more opium than she was in the habit of taxing in the evening, she thought proper to consult another physician who prescribed her very irritating powders which soon made the alvine evacuations cease. Madame de Stael profited by the interval to make visits to Paris and receive much society, but the œdematous state of her legs becoming even worse than before, and her complexion yellower, I was again consulted and prescribed the same treatment as before, with success, but the patient was frightened at some slight bilious evacuations, though necessary, and consulted another physician who advised a larger dose of opium. Costiveness ensued, and Madam de Stael fell into a profound stupor. I was again consulted. I prescribed strong lemonade and a few drops of nitrous ether in each glass. *Lavements*, slightly purgative, were given. She recovered from the stupor but the fever was really commenced.

It appeared to be real bilious fever. I was persuaded the treatment should consist in mild medicines with aperients. The patient diminished the quantity of lemonade from time to time, to take chicken broth with nitre, beverages of the infusion of *triticum repens* (dogs' grass) and chervil also with nitre sweetened with the syrup of the five aperitive roots. This treatment succeeded but Madame de Stael on being advised to

get up, experienced pain and spasms in the lower extremities and the oedema of legs increased and complicated as well the hands and arms. Known diuretics were prescribed; water cresses, borage, dandelion, water trefoil, live millipedes bruised, in large quantities, these were mixed and given in doses of five or six ounces at twice. The patient also took during the day nitrous ether and tincture digitalis, she seemed better for some time but soon complained of stiffness.

A skillful physician called in advised mercury, thinking the seat of the disorder in the liver, but the patient getting worse, this was abandoned. I wished to examine the matrix, and a celebrated accoucheur who was called in thought it enlarged. This was denied by an able surgeon who thought the disorder lay in the spinal marrow and that there was an extravasation in the vertebral canal. Another physician fancied he discovered hydrothorax and that he heard every kind of undulation in the cavity, by means of a sheet of paper rolled up like a trumpet and applied to the breast and his ear, and as the spasms continued, this physician thought advisable to apply two plates of magnetized steel to the breast. The inefficiency of this was soon proved. Gangrene set in, and Madame de Stael died the 14th of July at four o'clock in the morning, after an illness of four months. I learned from M. Jurine that at the opening of the body, there existed neither dropsy of the chest nor any disorder of the spinal marrow or vertebral canal, no extravasation, etc. The viscera were in good shape, only the liver appeared hardened in some parts longitudinally, but nothing to cause so severe illness. I think my treatment had produced some good effects.

May not some reproaches be made on the abuse of this treatment and the employment of contrary remedies? Would not the continuation of the juice of scorbutic and diuretic plants have been preferable to so many remedies which were administered and have saved the life of Madame de Stael?"—Portal.

Indeed, one could scarce help agreeing with M. Portal that had the treatment been a little less heroic, the woman who caused so much havoc by her writings and original ideas might have lived to endure another exile.

THE MATERIA MEDICA AND THERAPEUTICS LABORATORY.

J. A. PATTON, M. D.

The materia medica laboratory course was inaugurated during the last session and the practical therapeutic's course will be given this session for the first time.

The establishment of these two laboratory courses is a step in advance in the teaching of the two branches and places "*old Rush*" in the front rank in that direction.

Most medical schools that have materia medica laboratory work follow the general plan of the pharmacy schools, while here the attempt is to give enough pharmacy work to enable the student to understand the preparation and composition of his medicines and even this is pointed towards his good, namely the art of so writing his prescriptions that they will have the therapeutical effects of their components. The remainder of the work consists in testing the various incompatibles, prescription writing and compounding.

The work will follow the same general lines as the last years but will be more complete. Each week's work will consist of two lectures, one recitation and then two hour's laboratory work, and the entire week's work will be on the same preparations. The laboratory outline is as follows:

1st. *Base* of the group. Study of its source, preparation, physical and chemical properties.

2nd. *Pharmaceutical Preparations* of the base: preparation, physical and chemical properties. (Under chemical properties will be included tests for purity, etc.)

3rd. *Incompatibles*. The *chemical* and *pharmaceutical* will be illustrated and from these the *therapeutical* will be deduced and noted.

4th. During the course each student will make one or more of each of the more important classes of pharmaceutical preparations so that he may have a better idea of their composition and reactions and therefore prescribe them more intelligently.

5th. *Prescriptions*. Both the writing and compounding will be considered from the standpoint of the physician and all the preceding work will be for the purpose of enabling this to

be done with greater accuracy, neatness and certainty of result.

The materia medica course has been placed in the second year's work of the four year course so that the student may have a year's work in chemistry and physiology before taking up the study of materia medica.

A course of lectures will be given the freshman class during the latter half of the term on medical pharmacy and this will serve as additional preparation for the work of the regular materia medica course.

The therapeutical laboratory work will also be along practical lines and not the experimental as is the case in most laboratories.

There will be 20 hours in the course and these will be divided as follows: The first twelve will be devoted to the theory and practice of electro-therapeutics taking up the physics of electricity, theory of battery construction, galvanism, electrolysis, cataphoresis, magnetism, faradism, static electricity and the therapeutic indication and application of them. The remaining hours of the course will be occupied as follows:—

13 and 14. *Massage*: 1. Definition. 2. Technique. Methods—stroking, friction, kneading, percussion vibration, electro-massage. 3. Physiological effects—primary, secondary. 4. Therapeutics, nervous cases, general practice. 5. Synergists. 6. Contra-indications. 7. How to prescribe.

No. 15. *Dietetics*: 1. Dieting—Why when, indications requiring. 2. Preparation of special foods. 3. How to prescribe and govern.

No. 16. *Atomization*: 1. Reasons for use (Diseases, etc.) 2. Preparation of solutions. 3. Administration—Apparatus used, etc. 4. Effects—Therapeutical. Dangers.

No. 17. *Aerotherapy*. 1. Climatology. 2. Compressed air—Apparatus, methods, effects. 3. Oxygen—Preparation, administration, effects. 4. Other gases used in pneumotherapy. 5. Ventilation, etc.

No. 18. *Balneotherapy*. 1. Reasons for baths. 2. Kinds of baths. 3. Methods of giving. 4. Effects and Dangers.

No. 19. *Lavage*. (Illustrated on a case.) 1. The technique. 2. Uses.—Poisoning, gastric diseases, diagnosis. 3. Test meals—Preparation, administration, removal, testing.

No. 20. *Enemata*. 1. Uses (Nutrient and evacuant.) 2. Preparations of various kinds. 3. Administration. 4. Effects.

Douches. 1. Uses. 2. Preparation of various kinds. 3. Administration. 4. Effects.

These exercises will be illustrated with apparatus and patients when possible and necessary to make them practical in their teaching.

Alumni Department.

JOHN MILTON DODSON, A. M., M. D., EDITOR.

MEMBERSHIP IN THE ALUMNI ASSOCIATION OF RUSH MEDICAL COLLEGE is obtainable at any time by graduates of the College, providing they are in good standing in the profession, and shall pay the annual dues, \$1.00. This fee includes a subscription to *THE CORPUSCLE* for the current year. This journal is the official organ of the Association.

Dues and all communications relating to the Association should be sent to
JOHN EDWIN RHODES, M.D., Sec'y and Treas., 34 Washington St., Chicago

'49—"My year of graduation is 1849. I came to California soon after I graduated, and, by mistake, my name was omitted in the list of graduates of that year. Prof. Etheridge informs me that my name appears in the last Triennial catalogue with the class of 1849." DR. WM. H. WELLS, Oleander, Fresno Co., California.

'57—"I am getting a little old as an alumnus but I assure you I am young and vigorous for 'old Rush.' Don't drop me from the list." DR. L. D. DUNN, Moline, Ill.

'64—Dr. J. B. Fares has long been in practice at Romeo, Michigan.

'68—Dr. H. J. Warmuth, of Smyrna, Tenn., writes: "Owing to a spell of sickness I have neglected to send my subscription, which you will find enclosed. You may consider me a life long member of our alumni association."

'68—Dr. F. McGuire is in practice at St. Cloud, Minn.

'68—Dr. Henry C. Gemmill is at Markle, Ind.

'68—Dr. J. G. McKinney has a sanitarium at Barny, Ill.

'68—Dr. James Barr has removed from Roseberry, Ore., to Napa, Cal. He was formerly at Algona, Ia.

'69—I am somewhat of a back number, but I claim to be a legitimate and loyal son of 'old Rush.' I am proud of Rush Medical College and more especially to have been a member of the class of '68-9 which graduated such distinguished men in the profession as Chas. T. Parkes, James H. Etheridge, John B. Hamilton and others, who, "though lost to sight, to memory dear." The same sentiment applies to some of our dear and cherished professors of that day, to wit: Profs. Miller, Ingals,

Holmes, Lyman, Gunn and Rea—names and men that are dear to memory and as immortal as the 'old guard.' Yours for 'old Rush' and the CORPUSCLE. DR. C. C. SPRAGUE, Pierre, S. D.

'72—Dr. Otis Moor is at Niles, Mich.

'75—Dr. G. W. Farrow is in practice at East Lynne, Mo.

'77—Dr. M. Arthur has removed to Middleboro, Kentucky.

'80—Dr. W. W. Torrence, formerly of Keithsburg, Ill., has removed to Deadwood, S. Dak.

'80—Dr. F. H. Sugg is local surgeon of the C. M. & St. P. Ry., at Clinton, Ia.

'80—Dr. M. H. Cazier, who has recently removed from Pasadena, Cal., to 48-43rd St., Chicago, writes: "I heartily commend the enterprise which produces so creditable a journal as the CORPUSCLE, I think Rush college and the journal management are alike to be congratulated in the advances made and making."

'81—Dr. V. R. King has recently removed from Bedford, Iowa, to Fayetteville, Arkansas.

'81—"THE CORPUSCLE and Pulse are like a letter from home." DR. HENRY HANNUM, Bayfield, Wis.

'85—Dr. W. C. Bowers is in practice at La Place, Ill.

'82—Dr. Geo. J. Lund, having spent some months in special study of diseases of the eye, ear, nose and throat, in the hospitals of New York city and Philadelphia, is devoting himself to that special line of practice at Medina, N. Y.

'82—Dr. Albert A. Anderson, 413 E. Locust St., Des Moines, Ia., says "I couldn't get along without THE CORPUSCLE because it keeps me posted in the doings of 'grand old Rush.'"

'84—"I want THE CORPUSCLE as it brings me back to my college days as nothing else can do." DR. G. L. BULAND, Greenwood, Wis.

'92—Dr. A. F. Sippy, ex-interne at the Cook Co. hospital, has an office in the Abbey Block, at Akron, O.

'93—Dr. C. R. Pickering is at Muscoda, Wis. He says "I must have the news from 'old Rush.'"

'94—Dr. A. C. Behle is at the St. Mark's Hospital, Salt Lake City, Utah. He has also an office in the Atlas block in that city.

'95—Most of the 200 graduates of 1895 have found fields of labor before this time. Below is a list of some of the chosen

locations. Boys of '95, let us know where you are and how you are doing:

Dr. Louis Maywit, 1147 Lincoln ave., Chicago.
 Dr. W. D. Arnold, Freeport, Ill.
 Dr. H. A. Zinzer, Buckley, Iroquois Co., Ill.
 Dr. C. E. Triplett, Jr., Morocco, Ind.
 Dr. E. C. English, Moberly, Mo.
 Dr. J. P. Heinen, Streator, Ill.
 Dr. B. F. Replogle, Champaign, Ill.
 Dr. James H. Honan, Hammond, Ind.
 Dr. F. H. Westerschulte, North ave. and Leavitt, Chicago.
 Dr. D. W. McKenna, W. Taylor and Robey, Chicago.
 Dr. Eugene C. Rosebury, Ill.

'54—We copy the following from the Chicago Inter Ocean, of Sunday, Sept. 22nd:

Word was received in Chicago yesterday of the death of Dr. James McCreary Sudduth, formerly of Bloomington and Mason County, Ill. For several years he had been living on an orange ranch near Colton, Southern California. Dr. Sudduth graduated from the Rush Medical College, Chicago, in 1854, after which he entered into active practice in Central Illinois. Upon retiring from practice he gave his attention to banking and stock-raising interests, taking up his residence in Bloomington. Several years ago he went West, where he had lived ever since. He was 68 years of age and leaves a widow, one son, Dr. William Xavier Sudduth, of Chicago, and two daughters, Miss Alice Sudduth, national superintendent of the W. C. T. U., and Miss Margaret Sudduth, managing editor of the Union Signal, Chicago. The funeral will occur at Colton today.

'91—The following extract from a letter to Mr. Gould, the college clerk, will be of interest to the many friends of Dr. W. E. Minahan, who will be remembered as one of the prosecutors in his time: "Am doing a nice \$5,000 business in one of the best country places in Wisconsin, elegant gravel roads and good pay. Am married, have one child about a year old and am enjoying myself every day. Drive five hours and weigh about 230 pounds. Hear from Joyce in Utah occasionally and he says he is doing well. My brother, Dr. R. E., is practicing law and medicine with another brother in Keewanee. Brother J. R. is at Green Bay. He owns a \$25,000 hospital and manages to keep it full."—WM. E. MINAHAN, M. D., Calumetville, Wis.

'89—We regret to have to record the death of Dr. Wm. Le Roy Wilcox, of Irving Park, who was thrown violently from

his carriage on Sunday last while riding with his little boy, and instantly killed. Dr. Wilcox, was a very busy and successful practitioner and a deserving man and his death will be mourned by a host of friends and patients who knew and loved him.

'93—Dr. Elmer E. Morgan is located at Fort Wayne, Ind. He has been appointed lecturer on Materia Medica in the Fort Wayne College of Medicine.

'95—Dr. Robert B. Opitz is studying for the degree of M. S. at the University of Chicago.

'95—E. W. Baum has moved from Phoenix, Arizona to Morocco, Ind., and is now associated at that place with C. E. Triplett, M. D.

'95—W. C. Clark, M. D., has forsaken Momence and is now located at Cairo, Ill., where he will be glad to see such of his friends as drift his way.

'95—M. B. Parrish, M. D., is located in Peru, Indiana, Wabash Hospital.

'95—The friends of C. H. Jahn, M. D., will find him hereafter at North Milwaukee, Wis., instead of Thiensville, the doctor having recently made the above change.

'68—Dr. W. L. Johnson, Saratoga, Wyo., called the 30th. Has not been in Chicago since 1870. Had to inquire the way to the college. Has been in Wyoming for eight years, removing there from Crawfordsville, Ind., on account of the health of his son. Will return to that place. There are hot springs; mostly grazing and sheep. Place of 300; altitude 7000 feet. Says have rheumatism developed there, mountain fever, but no diphtheria, scarlet fever and little typhoid. With the baths can give large doses of iodides. Baths are salts of potassium and sodium. The doctor is prospering and keeping a drug store. Was locking up some of his old schoolmates.

'65—On Monday THE CORPUSCLE enjoyed the honor of a call from Dr. J. W. Trueworthy, of Los Angeles, Cal. The Doctor stops in Chicago for a few days this time on his homeward journey from a six weeks trip to London, Paris and Ireland. He reports a delightfully interesting time, and among other things of note mentions seeing Dr. Anderson operate at St. Thomas Hospital for fissure and hemorrhoids, and also radical operation for relief of strangulated hernia. During his

stay in London he also visited the London and St. James Hospitals and various other points of interest to medical men.

At Paris the Doctor, like all other visitors to that beautiful city, became deeply engrossed in general sight-seeing, but succeeded also in finding time to visit the Pasteur Institute, the memory of which, with the recent death of its immediate director, he cherishes with great pleasure. He also visited several of the most noted hospitals, among them the Hotel Dieu Invalades.

The Doctor was greatly taken with "Rush of to-day," and viewed with very evident satisfaction the various improvements made in the last decade. On Monday evening he listened to Dr. Senn's lecture on surgery and became so much interested in the professor that he decided to remain over the next day and attend the now widely known and praised "Senn's Clinic." He leaves this Tuesday evening for his home, highly pleased and eminently satisfied with all that he saw at his Alma Mater.

'94—R. M. Peters, M. D. and Miss Margaret Wiggins were married at Minneapolis, Sept. 25. The Doctor has located in Minneapolis, in partnership with Dr. J. H. Dunn, and the firm has, we understand, a lucrative practice.

'95—J. J. Pattee, M. D., another of last year's class, has located in South Bend, corner of Michigan and Wayne Sts., Ind.

95—E. S. Allen, M. D., has decided to remain at Marshfield, Wis.

IN MEMORIAM.

DR. ROBERT PECKHAM ECKHART.

Dr. Robert Peckham Eckhart, who died at Oak Park August 28th, seemed from birth to have been specially favored, and to have had before him a career of usefulness and prosperity. He was born in 1867, in Utica, N. Y., but his boyhood was passed in the village of Oak Park, one of Chicago's choicest suburbs.

The influences that tended to mould his character were all for good. His family, his boy and girl friends, his school and church associates, were as nearly ideal as can be found. He grew up a general favorite. He was the beloved eldest son, the life of a refined family and the hope of his parents; was extremely popular with his playmates, everybody liked Bob Eckart; his teachers were fond of him; his fellow church members pointed with pride to him as one of their number.

From the Oak Park school he went to Beloit, passing three years there in study, leaving behind a record of time well spent, of more warm friends made, of further progress towards his goal, the life of a physician.

He entered Rush Medical College in 1889, and pursued his studies with great credit to himself, attracting, even among the large number of students, the personal attention of more than one member of the faculty. The earnestness and zeal with which he worked, his fine personal appearance, his gentlemanliness, his modesty, were such that irresistibly the eyes of his teachers were drawn towards him.

At the close of his college career he married Miss Reita Waller of River Forest, Ill., and started for Europe, to be gone for one or two years. An attack of typhoid fever soon after reaching England compelled him to postpone his studies for several weeks. He never ceased to speak in praise of the great kindness and skill of the London physician who cared for him during this trying and serious illness.

His ten months' of study were spent chiefly in Vienna, Berlin and Dublin. He had a natural liking for obstetrics and gynecology, and paid special attention to these subjects. On his return he entered into active practice in Chicago, and was

at the time of his death obtaining a firm hold upon the affection and esteem of his patients and upon the physicians who knew him. The regard in which he was held by the profession was shown by the fact of his appointment as instructor in gynecology in Rush Medical College and in the Chicago polyclinic. He did much work as examiner for several insurance societies. He was attending physician to St. Mary's Maternity Hospital and the St. Elizabeth's Day Nursery.

His untimely death occurred from appendicitis.

There is nothing in the life of Robert Eckart for the necrologist to gloss over, nothing to explain. The record of every day of his life could, without blush or faltering, be laid bare to be read of all men. There was nothing to conceal. His life was purity, good will, kindness, earnestness, manliness. He looked on the bright side of things even when trouble came, as it came even to him. He encouraged and helped others. He was modest, yet self-confident.

All with whom he came in contact felt the warming and invigorating influence that radiated from him.

And so, while we mourn with those who were nearest and dearest to him, and while we offer to them our sincerest sympathy, we still feel that they and we can rejoice in having had, as one of our dearest friends, one who was so noble and good, and can rest assured that his life, so abruptly cut short, and when the future seemed bright with promise, has not been lived in vain.

J. B. H.

DR. HERMANN R. WITTWER.

Dr. Hermann R. Wittwer was a remarkable man. He was talented, and in many respects was a genius. Born and reared in Berne, Switzerland, he received his early education in the public schools and the gymnasiums of that city. A Bohemian in disposition, he was restless, and at the age of fourteen came to America. A few weeks on a farm in Wisconsin satisfied him that he was never to be contented as a tiller of the soil. He entered an American public school in the primary grade, sitting at desks suited to children of six or seven years, and being laughed at by his young schoolmates because of his ignorance of English. But in six weeks he had gone to the second grade, and in a few months he was in the high school, a leader of his class. He came to Chicago in 1885 and entered Rush College. From the first he was seen to be an unusually bright man. He was popular with students and with faculty

He gained a place by competitive examination in the Cook County Hospital, and served with distinction during his year and a half of internship. After a short time of private practice in Wisconsin, he went to Berne to visit his parents and spent a year in study, largely with Kocher, whose assistant he was. On his return, he was associated with Dr. J. B. Murphy, the association terminating a short time before his death.

If I were to name his chief characteristic, I should say it was good will and good nature. No man more willing to help was ever seen. There were scores of physicians in Chicago and vicinity who relied on him in every emergency. No matter what the time of day, the weather, the disagreeable nature of the case, the small size of the fee, Wittwer always responded, and always helped. He was fertile in resources, well equipped, confident and fearless. He was as ready to make a physical examination of the heart as to operate for hernia; as well prepared to remove a laryngeal polypus as to stain for tubercle bacilli; no abdominal operation ever appalled him. As a medical student he made, to my knowledge, intubation of the larynx. While an interne at the hospital, he went to Wisconsin and performed several operations in the eye and a number of laparotomies. And the best of it was that he did these things well.

One who knows, says that he believes Dr. Wittwer at the time of his death, was doing work that, at proper prices, would have amounted to \$30,000 a year. Eye-work, laryngeal and nasal cases, abdominal surgery, consultation work in obstetrics, straight medical work, all came to him and no one was refused. He often had twenty to forty calls for a single day. But in doing all this, he was his own worst enemy. He overworked. His overtaxed body began to give way. A nephritis and an asthma were not benefitted by his careless and self-forgetful habits. Asthmatic dyspnoea and insomnia led to the reckless use of chloroform as an hypnotic, and an overdose—that must certainly have been accidental—caused his death.

With care of self, Dr. Wittwer's future would have been brilliant in the extreme. He had unusual ability in other than medical lines. He spoke fluently German and French. His English scarcely betrayed his foreign birth. He had a worthy knowledge of Italian. He was a natural musician, with a pleasant tenor voice; his ability as a pianist was remarkable, considering his lack of training. He learned readily. His mind was logical in its workings, and it worked rapidly. He had a

wonderful faculty of making friends. He was, while in the hospital, on familiar terms with all. From the warden down to the scrub woman, every one knew Dr. Wittwer and every one liked him, and when ill, usually consulted him. His hold on people was remarkable.

His was a restless and untamed spirit. He had the natural gifts of a genius, but like many another unusually talented man, he was lacking in that balance and equipoise that enable one to become a great power in the world. But *nil nisi bonum de mortuis*. Forgetting his weaknesses, we think only of his great knowledge, of his great skill, and above all, his truly noble and unselfish heart, that made him one of the best friends a man could have, a friend in time of need.

J. B. H.

Charles W. King is the second son of Col. John F. King and Mary J. King. He was born February 8, 1867; was 28 years old; died Aug. 22, 1895. There survives him his father and mother and six children, three sons and three daughters.

Dr. King graduated from Rush with a class of 200, May 22, 1895. He associated himself in practice with Dr. John O. Connor of Buffalo, immediately after graduating. He was in practice six weeks and four days. On July 19, he was taken down with typhoid fever, and, after a lingering illness, died Aug. 22, 1895. His father resides on a five hundred acre farm, two and one-half miles south and east of Riverton, Illinois.

JOHN F. KING.

VIENNA, May 17, '95.

(Continued from September number.)

My chief joy is the Votive Church erected to commemorate the escape of the Emperor from the knife of an assassin in 1853. It is built in fine Gothic style, of a peculiar gray stone which varies in color with the state of the atmosphere, though I see it at least four times a day it never looks the same and always more beautiful. Though of solid stone it is so airy and light in appearance that it would seem possible to blow it away with a breath. No where except in the Latin Quartier in Paris have I seen such marvellous stone-work. Within are fine decorations and 78 stained glass windows presented by friends of the Emperor, cities, principalities and private associations to express their gratitude for his preservation. And a fortunate thing indeed

it was for Vienna that Kaiser Franz Joseph was preserved for her. To him she owes the beautiful Ring-strasse which marks the site of the old fortifications, the Hof-Opera and the Hof Theatre, built and maintained at his own expense, and many other buildings. He is worshiped by his people and to him belongs the honor of having made Vienna the most beautiful city in the world.

I have made it my plan to attend the hospital clinics in the morning when all the operations are done and to devote the afternoon to sight seeing, and thus have been able to accomplish a good deal. A pilgrimage to the graves of Beethoven, Schubert, Mozart and Gluck with two other music-loving Americans was a great pleasure and also a walk through the "Prater" with Dr. Edward Tinen was an amusement of a different nature. I really felt as if I were back on the "Midway" again. The "Midway" idea certainly had its origin in the "Prater." It was a great pleasure to sit down and drink beer with Dr. Tinen (who is doing famous good work here) and talk about "Old Rush," our dear Alma Mater who grows dearer to our hearts the further we are away from her.

It was my good fortune to be in Vienna at the time of the annual Blumen-Corso, a grand flower-fete at which there were this year 3000 carriages decorated with flowers in the most elaborate manner. The Corso is conducted much on the same principle as the Carnival in New Orleans. The occupants of the vehicles carry baskets of small bouquets and pelt one another as they pass in grand procession before the judge's stand. Prizes are given for the best costumes and decorations, and every one has a jolly good time. It affords an excellent opportunity of seeing the elite of Vienna—arch-dukes, and duchesses, princes and princesses, counts and barons—all the nobility except the Kaiser were out, and the Princess Stephanie, wife of the beloved and lamented Prince Rudolph, bowed to me and 10,000 other as she passed. I would rather see a good clinic than the Blumen-Corso but when one is in Vienna one must do as the Viennese do, and they all went to the Corso. It was like Chicago Day at the Fair on the way home on the street cars. The Germans have a very aggravating way of stepping on your toes without as much as "if you please" and Dr. Tinen says that it is not safe to say what you think or *do* what you think either, as an American is quite likely to be locked up for breaking the peace.

From a description of the Blumen-Corso to a report of a

sectio-Caesarean done by Schauta is quite a jump, but I hope it may be pardoned when I call the attention of the readers of **THE CORPUSCLE** to the fact that this is simply an informal letter and not a scientific report of cases. The patient had been in labor for 24 hours, and as an examination showed such deformity of the pelvic bones due to osteo-malacia as to absolutely prevent natural delivery, an abdominal section seemed to be indicated, and was accordingly performed by Prof. Schauta, after the method of Porro. All antiseptic precautions were taken to prevent infection, and I must confess that even my Rush college surgical sense, (a faculty that is developed to a high degree in the surgical atmosphere of "Old Rush"), was completely satisfied.

Prof. Schauta washed his hands at least 20 minutes, and throughout the whole operation maintained the most vigorous asepsis. Before beginning the operation he said that he should work on the supposition that the patient was already infected as the history showed that she had been examined by midwife, and he regarded the midwife as an almost absolutely certain means of infection. Therefore he proposed not only to deliver the child but also to extirpate the uterus and to make the stump extra abdominal. An incision extending from the xiphoid appendix to the os pubis was made in the lined alba, through the highly thinned abdominal wall, and the uterus lifted out; then the wound was sutured from above downward close to the uterus, and the abdominal cavity was absolutely protected by these sutures and tampons, while the delivery of the child was made by a vertical incision at the fundus uteri. Child and placenta having been successfully removed the elastic ligature was applied and the uterus extirpated, leaving an extra abdominal stump which, after being cauterized, was dressed in the usual manner. The result in this case justified the method as both mother and child are living and well.

The Pfingsten holidays being at hand, I made use of the opportunity and the reduced rates to make a little round-trip excursion to Venice, an indulgence which I had not contemplated when I planned my trip but which I shall never regret.

Venice is a city which every traveler should see and he should also, if possible, be there during the month of June, during full moon, when she reveals herself in all her beauty. There can hardly be any place more lovely than the large square before St. Mark's church under a full moon, crowded

with a throng of light-hearted, pleasure-seeking people, the beautiful church at one end of the square decorated with such magnificent mosaics as only the Italians can make, on one side the new palace and on the other the old palace, and above all looms up the Campanile, the bell-tower up which Napoleon rode on horseback. A fine band plays at the base of the ancient pillars which support the winged lion of St. Marks and the patron saint of Venice.

If the night is warm and one tires of the bustle and excitement of the public square it is easy to call a gondola and silently glide away among the dark canals or out into the Grande canal and there listen to the music from the distance and look back upon the city brilliant with many-colored lights.

In Venice I went through the hospital, an old convent converted into a hospital first by Napoleon. The return to Vienna found me in my accustomed place at Gussenbauer's clinic, who was so polite as to note that I had been away, and made me feel happy that I had returned by making a resection of the superior maxilla for osteo carcinoma, in which he removed not only the upper jaw but also the greater wing of the sphenoid bone. Even more bold was a later operation during which portions of the scalp, calvarium and dura mater, as large as the palm of a man's hand were removed on account of an extensive carcinoma. The rule in this clinic in the removal of malignant growths is complete extirpation of every portion of infected tissue even at the risk of sacrificing a little sound tissue. For instance, in amputation of the mammary gland for carcinoma all the skin over the gland is cut away with the tumor, no matter how healthy it may appear to be, also all the fat in the axillary space and in the space between the pectoralis major and minor muscles and the fascia covering the muscles, is removed.

I did not know how deeply I had become attached to Vienna and my new found friends until the day came when it became necessary to say farewell, then indeed with a sad heart did I leave the city of light-hearted people, as Vienna has been rightly called, and set my face toward Berlin. After a stay of a few days in Dresden to see the art treasures there chief among which is the divine Sistine Madonna of Raphael, I find myself in Berlin.

The chief surgical attraction here is the clinic of Prof. von Bergmann, which is very well attended. so well attended in fact that it would have been very difficult for me to have

obtained entrée to the arena had it not been for a personal letter of introduction to Prof. Bergmann, which Prof. Gussenbauer had the kindness to write for me before I left Vienna. A friendly reception and a pleasant invitation to enter the arena made me feel quite at home, and I had the pleasure among other things of seeing von Bergmann do an osteo-plastic operation for spina bifida. A crucial incision, careful isolation of the sac, replacement of nerve filaments within the spinal canal was followed by an ingenious osteo-plastic procedure which consisted of chiseling away a portion of the rudimentary spinous process, and using it as a means of closing the opening in the spinal canal. Bergmann, as his name signifies, is indeed a man mountain in figure as well as in intellect. As an operator he does not compare with Gussenbauer but as a teacher he is very fine as he talks during the operation and thus makes it possible for the spectators to know what is being done which would otherwise be impossible as there are at least half a dozen unnecessary assistants who stand in the way all the time. The assistants ought to take a short course in training in the Rush clinic, they would be vastly improved.

The time is coming now when I must begin to think of turning my face homeward but before returning I shall visit Leipsic, Halle, Zurich and Bern and if I can find time will let you hear again from me and give you my impressions of Kocher in Bern. As I write it happens to be Saturday and I wish very much that I could take my accustomed place in the clinic as assistant to my respected chief, Prof. John B. Hamilton.

WM. B. MARCUSSEN, A. M., M. D.

Athletic Department.

The summer months are past. The fall is here, and the student once again turns his attention to his college, to both studies and pleasures, which go to make up what is commonly called "college life."

"College life" has two distinctly different meanings when applied to academical and professional schools. In the former the pleasure element is undoubtedly paramount, too often, to the unfortunate exclusion of judicious and thorough study. In the latter case, study is too commonly paramount, to the harmful exclusion of healthful exercise.

With the idea in view of harmonizing these two conditions, and introducing a proper amount of pleasurable and healthful exercise into the medical student's life, the faculty, alumni and under-graduates of Rush have undertaken to establish an athletic association whose object shall be to maintain and manage teams in the various branches of athletics. Since the organization of the association, through the timely aid and support of the faculty and unceasing perseverance of enthusiastic under-graduates, results have been exceedingly gratifying and success to a good degree has crowned their labors.

Now at the beginning of a new year, the success of former years must be continued. The foundation has been well laid. To complete the structure is easy. In a great degree, future success depends upon the in-coming class, to these men, the class of '99, we must look for our athletic material. It is our aim and desire to instil into the minds of the in-coming students of Rush the fact that there exists in this institution a true, genuine college spirit, such a spirit as cannot be found in any other professional school in the country.

It is this spirit, pervading faculty, alumni and under-graduates, which has raised our Alma Mater to the high position that she today holds among medical institutions in the United States and Europe. It is this same spirit which has made successful previous athletic enterprises, and we call upon the new members of our college to lend their aid in forwarding and maintaining athletics. Every man who has played foot-ball, is requested to immediately present himself at the practice

ground, and he will be given ample opportunity to show his prowess, and if he has the required ability will be given a position upon the team.

An eastern trip is at present under advisement. It is the intention of the management to leave Chicago October 31. Games have been arranged with Pittsburg A. A. Pittsburg, Nov. 2. Washington, Jefferson College, Washington, Pa., Nov. 4, and Cleveland A. A., Cleveland, Ohio, Nov. 6. Sixteen men will be taken on this trip and a special car secured.

The football management submit the following schedule, subject to change:

C. A. A., 35th St. and Wentworth Ave., Oct. 5.

W. Div. H. S., Douglas Park, Oct. 9.

Chicago University, Chicago University, Oct. 12.

University of Illinois, Champaign, Oct. 19.

Notre Dame, Notra Dame, Nov. 14.

Beloit, Beloit, Nov. 16.

C. A. A., C. A. A., 35th St. and Wentworth Ave., Nov. 23.

Beloit, Rockford or Elgin, Nov. 28.

We cannot impress too strongly upon all Rush men the importance of joining the Athletic Association, and thereby materially aiding the management in its work. To put forth successful teams requires money, and fees thus received is the only certain source of revenue. The fee is only \$1.00, or \$10.00 for life membership. Let every man in college join the association.

Football practice began Sept. 24, on the grounds just east of the Cook County Hospital. The following men reported: Sager, Fullenwider, Loomis, Griffith, Meloy, Stevenson, Smolt, Barrett and Duncan. McNary, who is coaching Monmouth, is expected in a few days.

Captain Sager appreciates fully the importance of faithful fundamental work, and his experience on the football field has shown him the vital necessity of perfect detail. Accordingly he is beginning at the bottom, and the preliminary training consists of running, falling on the ball, passing, kicking, tackling and catching. Many an important game has been lost through inability to fall on the ball at the critical moment or by a bad pass. Sager is perfecting his men in these eminently important details in order to prevent any such calamities. Later great attention will be given to team work, and although the

new rules practically prohibit mass plays, many new effective movements will be inaugurated.

At the present writing the make-up of the team is entirely undecided. The old men will be given their old positions until better men assert their claims, when the former occupants will have to step down and out.

As yet little new material has appeared, but there is no doubt that later many new aspirants will be found upon the football field.

The team will be greatly strengthened by the presence of a professional coach. Alward, of the Chicago Athletic Association, is now coaching the team and a little time only is all now that is required to make the team effective in its work. Alward's ability as a coach has been repeatedly proven, and under the guidance of this man Rush can turn out a team second to none in this section of the country.

The Rush eleven met the heavy-weights of the Chicago Athletic Assn., Saturday last, and were defeated by a score of 30 to 0. Although such a score, in itself, is not altogether satisfactory, the game gave ample opportunity for the location for those weak plays and players that are to be removed, and if such a result is accomplished, the game may be considered the most successful of the season.

Several of the men made an unusually good showing, holding their position well and being found in every play. Prominent among these were Sager, Fullerweider, Libby, Loomis, and Duncan. There were others who made a very creditable showing, but the work of above named gentlemen was almost above reproach and if the team as a whole can be brought to the standard represented by these men, as they played in the Saturday game, it will be almost if not quite invincible.

LOCATIONS.

First class young physician in good live town in Minnesota. Building and interest in stock of drugs furnished by gentleman who is not himself a druggist. No other physician in the place. Are anxious to get a good man. Address, David Ryan, Bigelow, Minn.

Young man may learn of a good opening by addressing Mrs. L. W. Carlton, Powersville, Missouri.

A good man wanted at Aurora, Iowa. W. C. Amsden, Druggist.

German speaking physician will do well to call on or address J. R. Conley, druggist, 38th and Kedzie avenue, Chicago. Good location for the right man.

New town, just opening. located at the junction of the Chicago & Ohio River and the Terre Haute & Peoria Railroads. Fine rich farming country. Excellent opening for a young man with snap, push and a few hundred dollars to start small drug store. Address, Messrs. Ashmore, Blair and Bolén, Borton, Edgar Co., Ill.

In addition to the above THE CORPUSCLE has several places they have been asked to personally refer applicants to. We shall be glad to furnish all desired information upon application.

PSEUDOPODIA.

A SPECIMEN OF THE "NEW HUMOR."

An indignant correspondent invites our attention to what he calls "an infamous lie" respecting that much-injured innocent, the medical student. In an article by Mr. G. B. Burgin, which appeared in *The Idler* a short time ago, it is stated that students in the dissecting room "may be seen cutting up a specimen and their lunch simultaneously," and the writer expresses wonder that "they dont mix things sometimes." Our correspondent, who lives abroad, may perhaps be excused for not quite understanding the "new humor," which is nothing if not playfully imaginative. It must also be admitted that the new humorist too often seasons his inventions not with Attic salt, but with a coarser home product better adapted to the somewhat dull intellectual palate of the public for which he caters, It would be as absurd to take the kind of thing we have quoted seriously as it would be to treat Mr. W. S. Gilbert's topsy turvy extravaganzas as pictures of real life, or Mr. Oscar Wilde's laborious mutilations of other men's wit as epigrams. Mr. Burgin has, perhaps, been misled by a too literal interpretation of a piece of student "chaff" in Conan Doyle's *Under the Red Lamp*. There is, indeed, a legend that a distinguished professor of physiology, in a moment of profound abstraction, was once about to swallow the dead body of a frog instead of a sandwich, when he was saved from this catastrophe by a vigilant assistant. Even that diligent student of anatomy, Bob Sawyer, who found that nothing gave him such an appetite as dissecting, did not try to make Mr. Pickwick believe that he satisfied the pangs of hunger in the dissecting room. The medical student of the present day is, it is true, grievously burdened with work and has little time for the amenities of life; still, he respects its decencies. We assure Mr. Burgin and any elderly spinsters whom his little joke may have scandalized that the medical student of today contrives, as Falstaff says, to "live cleanly as a gentleman should do." He does not lunch, like a scientific ghoul, among fragments of anatomized humanity, and, for the benefit of other new humorists, we may add that he does not generally sleep on an operating table or shave with a dissecting knife.—*British Med. Jour.*

L. J. Townsend, '96, has the agency for W. T. Keener selling the Saunders Bros. American Text Book series. He is located at the College Pharmacy, corner of Hermitage and Harrison. Drop in and see him.

*
* *

A little girl who was learning to read by studying the big print in the newspapers, says an exchange, prayed the other night as follows: "Dear Lord, make me pure—make me absolutely pure, like baking powder." This beautiful and true story is commended to the prayerful people who think it does not pay to advertise.

*
* *

The courts of Kansas have lately decided that any physician who should sue for services would not only lose his fee, but also would be liable to fine or imprisonment or both. This is because a fee bill is in the nature of a trust or combination.

*
* *

The following firms have representatives at the college this year, and we should be glad to see the students favor them with their trade, as each and every one of them are reliable and may be depended upon to treat you well.

Chas Truax Greene & Co. { D. L. Humfreville, '96
Elmer M. Eckard, '96.

Sharp & Smith { Clarence E. Heminway, '96.
Colby Rucker, '97.

E. H. Colgrove—D. L. Humfreville, '96.

*
* *

There was once an examiner—I've heard tell—

There was! There was!

Who declined every case that to him fell—

But pause; O, pause.

They all had consumption—there was no hope

Till they found a big fly in his stethoscope;

The company "fired" that doctor, I hope.

N. Y. Medical Examiner.

*
* *

"Pa, can you tie a knot in this cord?"

"Yes, of course."

"Can you tie a knot in any cord?"

"Yes."

"Can you tie a knot in your spinal cord?"

"Johnnie, go to bed, and keep still."

A Toronto woman, after burying her seventh husband, erected a monument to the whole lot. It consisted of a marble hand with the index finger pointing to the sky, and on the base instead of names, dates, etc., were the words "Seven up."

* *

DANGER OF BREVITY.

Mrs. Yearwed—I—I wish to look at some babies' shoes.

Clerk—White kid?

Mrs. Yearwed—Sir!—N. Y. Weekly.

* *

Pompous professor (to his class in medical university):
"The patient you observe, young gentlemen, has one perfect eye, whereas the other is thrown inward toward the nose, causing a painful obliquity of vision. In this instance you, Mr. F. may rise and tell the class what you would do."

Mr. F. (after a pause)—"I presume I would look just as cross-eyed as he does."

* *

Physicians who observe the tongue
Diseases of the body find.
To others doth this organ red
Reveal diseases of the mind.

* *

Here is a sample of medical practice in the backwoods.—

A tourist who had had the courage to undertake a horse-back tour in the backwoods of the West was taken ill while staying all night at the cabin of a typical backwoods-man.

'I'll go an' git old Mag; she'll fetch ye 'round all right," said his host.

"Old Mag," who would certainly have been hanged for a witch had she lived in or near Salem a couple of centuries ago, arrived at midnight.

"I know jist what ye need, young man," said she, "ye want first off to be bled and then blistered and then a good, strong onion poultice put to yer feet an' a right lively mustard plaster to yer back. Then ye want to take half a teacupful o' yaller dock bitters ev'ry hour an' a couple o' quinine pills ev'ry hour an' a pinch or two o' salts, an' if that dont fetch ye 'round we'll try givin' ye a sweat an' rubbin' ye from head to feet with goose grease an' cayenne pepper. Yer a mighty sick man, but I kin fetch ye 'round if anybody kin."— *Detroit Free Press.*

Last year it was estimated that Philadelphia medical colleges would have an enrollment of 3,200 students, making that city, it was claimed, the medical center of the United States. The actual aggregate matriculation following this bright prophecy was a little disappointing, but still we notice in a recent issue of the *Medical News* that they are at it again and on a carefully arranged estimate expect to have 2,500 students with them this year, that is including regular medics, dental and pharmacy students, and claiming that this will still retain for them the undisputed right to be termed the "medical center."

Counting the actual enrollment to date, and estimating therefore less than one sixth of what the actual matriculation will be, we append the following list of Chicago schools and their attendance, which will, we trust, have the desired effect of quieting the Philadelphians for another year on this subject:

Rush Medical.....	900	Bennett Medical.....	100
Physicians & Surgeons..	300	Harvey Medical.....	50
Chicago Medical.....	300	Harvard Medical.....	50
Woman's Medical.....	150	Chicago Summer School.	50
Hahnemann Medical.....	250	Physio Medical.....	30
Chicago Homeopathic...	250	N. W. U. Dental.....	100
Policlinic	150	Chicago Dental.....	500
Post-Graduate.....	150	American Dental.....	350
Herring Medical.....	150	Northwestern Dental....	30
Dunham Medical.....	100		

Making a total of 3,960. And this does not include either pharmacy or veterinary schools, which would carry the number considerably beyond four thousand.

THE PNEUMOGASTRIC NERVE.

Upon an average, twice a week,
 When anguish clouds my brow,
 My good physician friend I seek,
 To know "what ails me now."
 He taps me on the back and chest
 And scans my tongue for bile,
 And lays an ear against my breast,
 And listens there awhile.
 Then he is ready to admit
 That all he can observe
 Is something wrong inside, to wit—
 My pneumogastric nerve.
 Now when these Latin names within
 Dyspeptic hulks like mine

THE CORPUSCLE.

Go wrong, a fellow should begin
 To draw what's called the line.
 It seems, however, that this same
 Which in my hulk abounds,
 Is not, despite its awful name,
 So fatal as it sounds;
 Yet of all torments known to me
 I'll say without reserve
 There is no torment like to thee,
 My pneumogastric nerve!
 This subtle, envious nerve appears
 To be a patient foe—
 It waited nearly forty years
 Its chance to lay me low;
 Then, like some blithering blast of hell,
 It struck this guileless bard
 And in that evil hour I fell
 Prodigious far and hard.
 Alas! what things I dearly love—
 Pies, puddings and preserves—
 Are sure to rouse the vengeance of
 All pneumogastric nerves.
 Oh, that I could remodel man!
 I'd end these cruel pains
 By hitting on a different plan
 From that which now obtains,
 The stomach greatly amplified,
 Anon should occupy
 The all of that domain inside
 Where heart and lungs now lie;
 But first of all I should depose
 That diabolic curve
 And author of my thousand woes,
 The pneumogastric nerve.

—Eugene Field

The physician was surprised to find the head of the household at the door with a shotgun.

"Why--what's the matter?" stammered the doctor.

That there medicine you give my wife she says is makin' her feel like a new woman. And I want you to understand that no new woman business goes on in this house. Fust thing I know she'll be out makin' s peeches."

—*Indianapolis Journal*.



FRED W. BYERS, M. D.

The Corpuscle.

RUSH MEDICAL COLLEGE, CHICAGO, ILL.

MEDICAL DEPARTMENT LAKE FOREST UNIVERSITY.

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EDITORIAL COMMITTEE.

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RUBY RED AND BLACK: Colors of Lake Forest University. ORANGE: Color of Rush Medical College.

EDITORIAL.

Among the numerous graduates of the past half century, Rush has many sons of whom she is proud—many of whom by unremitting effort and perseverance, tempered perhaps by the assistance of fortuitous circumstances, have won unusual distinction among their *confreres*.

Such an one, is Fred W. Byers, M. D., of Monroe. Wisconsin, the present Surgeon General of the Wisconsin National Guards, and a graduate of the college in the year of 1862-63. Regarding him we quote the following from an article in one of the journals of his section:

"General F. W. Byers was commissioned a surgeon of the Illinois volunteers and served in the field until the close of the war. The regimental historian says: 'Without disparagement to others, it may be truly said that Surgeon Byers was always the most jovial and popular member of the staff, and held the affections of the command to a degree that was en-

tirely exceptional.' He has been highly complimented for services and gallant conduct on the field of battle.

In 1880 he was appointed United States examining surgeon for pensions, which appointment he has held through both political administrations and still retains the same. He was elected a member of the Wisconsin Assembly in 1884, and served as chairman of the committee on military affairs, introducing the bill for the reorganization of the national guard of the Badger State, which passed both houses as a popular measure. He was commissioned assistant surgeon of the 1st regiment infantry, W. N. G. at its organization, and was made major and surgeon in 1885, and surgeon general with the rank of brigadier general January, 1895. He was elected medical director of the Grand Army of the Republic, department of Wisconsin, in 1885, and has been national delegate, also aid-de-camp on the staff of two commanders-in-chief. He was one of Wisconsin's representatives selected to attend the funeral of Gen. Grant in New York in 1885."

Elsewhere in this number will be found his "Personal Recollections of Prof. Brainard," which will prove of interest to every Alumnus and student of the college, since the doctor was an intimate friend of the late Professor of Surgery, and his statements regarding him are therefore authoratative.

A HITCH IN ADVANCE.

We quote the following from the *Maryland Medical Journal*:

"The inauguration of the four-year course, which it was fondly thought was *un fait accompli*, has met with a most unexpected set-back. A defect in the wording of the rule enforcing the additional year has been quickly recognized by cunning deans lying in wait for their foes, and like Shylock, these gentlemen insist upon their rights to the full measure of the pound of flesh. * * * * *

"Laying aside levity, there is no doubt that by a sort of pretty general consensus, it has been determined to postpone the four-year course until 1896. Catalogue after catalogue has come to us announcing the continuance of the three-year course for 1895 and 1896. Among colleges that have taken this decision are Bellevue, the University of Richmond, the Baltimore Medical, and, we understand, all the St. Louis colleges. In view of this, and in justice to all, would it not be

better for those colleges that have already announced a four-year course for 1895 and 1896, to reverse their action? Is it possible to obtain an expression of opinion on the subject from the American Medical College Association? Could not the judicial council of that association assume authority to take this action? We have been informed that some of the four-year schools are getting around the difficulty by matriculating students for a three-year course at any time prior to October 1, 1895."

From another exchange we note that "the faculty of the Yale Medical school have decided that the lengthening of their course shall not take place this year, as was originally planned but will go into effect September, 1896. This fall's class will be the last to take a three years course, after which four will be required."

We are pleased to announce that Rush has persisted in the resolve to adopt and maintain the four year course, and has so issued her catalogue, and is matriculating her students with this understanding. And we are also happy to note, that what, apparently, others have feared for their institutions, has not occurred with us, since our matriculation will, from present showing, equal that of any other year.

In considering the matter, we cannot but feel proud of the spirit manifested in the adoption of such a resolution for increasing the requirements, nor refrain from referring with pride to the firm and resolute manner in which the new policy is adhered to by our Alma Mater, and a few other institutions, who are in this way earnestly seeking to promote the best interests of the medical profession.

STUDENT GOVERNMENT.

In the CORPUSCLE of last May the attention of the students was called to the above subject. There has never been a time in the history of RUSH when she seemed in better condition for such a change than now. With influential members of the faculty in favor of "student government" and a class of students imbued with the true *student spirit*, success is but a matter of time.

The Honor System (student government) was adopted by the students of Princeton last May, after two years of agitating the subject. They have a committee of six students appointed to deal with any violation of the Honor System. This committee in extreme cases must report to a mass meeting of the students. Each offender is entitled to a fair trial before the student tribunal, witnesses being heard on each side of the case. Five of the six votes are necessary for conviction.

Violation of the "Honor System" at Princeton consists in any attempt to receive aid or to give assistance on examinations. At *Rush* such a system ought to include much more than merely dealing with the examination question. A *representative body of the students* ought to be chosen for the purpose of dealing with certain other matters pertaining to the interests of both college and student. The feeling that such a scheme would prove a failure should not prevent the attempt to create a strong sentiment in its favor. The success of the plan at Princeton has effectually closed the mouths of the critics and its success is quite generally conceded.

If any class of men on earth should cultivate the better nature, it is that to which the physician belongs. No man gets so near as the doctor to the great throbbing, pulsating heart of humanity. No man should be more strongly influenced by the sense of right and honor, for upon no other does so great responsibility lie. Since this is the case, why not commence during college days to cultivate character by a system of self-control that will spread to the student body as a whole and, find its highest attainment in perfect "student government?"

A MERE SUGGESTION.

It has always been the policy of THE CORPUSCLE to refrain from offering either criticism or advice; it has overlooked the frailties of each succeeding set of classmen as they entered the college, confidently expecting that the new-comers as they became familiar with the customs of the place would improve their apparent eccentricity of manner. With the majority of the men composing such classes we are delighted to say that

this expectant treatment proved to be exactly the proper one, the greater number showing themselves to be not only earnest students but also gentlemen of the deepest dye, the like of whom are a pride to any college and make college life and associations an absolute pleasure. In passing, we may be pardoned the observation that the present Freshman class shows no signs of being an exception to this rule.

But in every class there are a few who apparently cannot content themselves by being even obscurely good, and

“Whose varied traits we mellow
By calling him a jolly fellow.”

In speaking of these we sincerely trust that the little annoyances they so frequently cause arise alone from a mirthful spirit, untempered by deliberation, since, if it be unthoughted, a suggestion to the effect that seriousness is occasionally in order may inspire them to at least consider the matter and experiment on a different course of action, for accomodation if nothing else.

The fact is not questioned that it is their privilege to entirely disregard a lecturer or even fall asleep if they like or get up and leave (?) if they get tired, or destroy anything of their own they may have at hand. Having paid for the privileges of instruction they can accept them or not as they choose, and their personal effects are their own to do with as they see fit. And beyond this, too, their actions are only limited by a regard for others, since it is generally allowed that students of professional schools are men enough to be placed upon their honor in matters of conduct, and only general rules are laid down for their government; yet we would suggest that it might be well, whatever their privilege, to observe a certain regard for the property and comfort of others.

We shall not point a way wherein the application of these suggestions will most avail. It is certainly patent to all. Nor will we say that all mirth is out of place, for certainly it is not; nor presume to reprove any specific error, since our province is limited to suggestion. Beyond this the matter lies with their honor as gentlemen, and the leniency or severity of the executive faculty, or worse yet, the wrathful demonstrations of an offended majority of their fellow classmates.

"THE P. & S. PLEXUS."

We are pleased to note the appearance of a new medical college publication, "*The P. & S. Plexus*," which, as the name indicates, is a product of the mental fertility of the students of the college of Physicians and Surgeons.

The first number contains sixteen pages of reading matter, and is a very neat appearing, newsy and altogether creditable issue. It is announced as strictly a college paper, with no aspirations for a reputation as a regular medical journal, and if we are to judge of the success of the enterprise by the enthusiasm of the editors and managers, we may expect a great deal of the *Plexus* in future.

THE CORPUSCLE, which for so long has enjoyed a monopoly in this line, is glad to welcome the new journal into the field of medical college publications in Chicago, and sincerely hopes that the *Plexus* may not follow the unhappy example of the *Scalpel* of days gone by.

PERSONAL RECOLLECTIONS OF PROFESSOR BRAINARD.

BY FRED. W. BYERS, M. D.

Surgeon General of Wisconsin.

Professor Daniel Brainard was the real founder of Rush, for it was mainly through his untiring efforts and influence that the college was founded in 1843. He was made its first President, which office together with that of Professor of Surgery and Clinical Medicine, he held continuously until his death in 1866.

It was my good fortune during college days to know him well, and it is extremely gratifying now to recall the very agreeable relations which existed in the long ago.

He was a man of great perseverance, of methodical business habits, fine judgment, cool and deliberate at all times, and, in common parlance, never "got rattled."

Once while operating in a patient's throat his instrument broke off. The misfortune might have resulted in disaster to reputation as well as life, but the doctor was equal to any emergency. He deliberately took up a pair of forceps, luckily siezed the broken piece, removed it with little difficulty, and without a word placed it on the table as if nothing unusual had happened. Afterward he pleasantly remarked that the bystanders supposed that it was only part of the operation.

He did not pose as an orator, but as a lecturer he had few equals and no superior. He indulged in no amusing stories but held the attention of everyone, and was punctual to a degree that was certainly remarkable and exceptional.

After delivering diplomas to our class Dr. Brainard made a brief but characteristic address. He said in substance that graduates were expected to devote themselves to the profession, that in some instances solemn oaths had been exacted at graduation that they would so devote themselves. "You are but entering upon the threshold of science. At this time there are many inducements for physicians to step aside from the true path of medicine.

"Do not go into any of the by-paths of medicine. I appeal not only to your honor but to your desire for permanent good. There is neither honor nor profit in leaving the true

path of medicine. If you do, while we cannot recall the diplomas we have given you, we shall no longer consider you as alumni of Rush Medical College, but as deserters from a great and noble cause.

"We expect from you great services in the cause of humanity, and in accepting your diplomas you all pledge yourselves to this. Let me exhort you to be good and earnest physicians and good and earnest men."

He had his peculiarities of address, and by many was deemed unapproachable and reserved, but thousands felt his genuine kindness of heart and genial feelings; all recognized his sterling honesty. He hated shams and all kinds of empiricism, made no parade of his attainments, and cared little, apparently, for forms, yet on occasions was courtly in manners, polished by culture and foreign travel.

The last time I saw Dr. Brainard was when en route to the regiment then in the field, to which I had been ordered for duty. His fatherly words of advice were full of feeling and will never be forgotten. He ever impressed me with respect and regard for him as a gentleman. Although reticent and of a rather stern exterior, there throbbed in his manly bosom a heart as tender as ever beat within the human breast. He was the peer of the ablest and best men in the world.

THE LIFE AND CHARACTER OF BENJAMIN RUSH, M. D.

BY JOHN MILTON DODSON, A. M., M. D.

(Address delivered at the opening of Rush Medical College Oct. 1, 1895.)

MR. PRESIDENT, MEMBERS OF THE FACULTY, STUDENTS AND FRIENDS OF THE COLLEGE:—About a century ago, at this time, in the city of Philadelphia and in the only medical college then existing on this continent, the students and faculty were gathered together on an occasion similar to this. An address was delivered by Dr. Rush, the Professor of the Institutes of Medicine, in the Philadelphia Medical College.

Some of you present here this evening may have yet to learn that in the name attached to this college is perpetuated the memory of one of the greatest medical minds which this or any other country has produced, and the legend on the wall above me, may for the first time inform you that this institution is named in honor of Benjamin Rush, M. D., Physician and Patriot.* * * *

In view of the prominence which in recent years has been given to the godfather, if we may so style him, of our college,

and believing that every student here should have some knowledge of this illustrious man, it has seemed to me that I could not do better than select as a theme for this address the life and character of Benjamin Rush, physician, patriot, philosopher, and philanthropist, the eloquent teacher and writer, the founder of scientific medicine in America, and one of the noblest of men. We may learn from such a history, as from that of the life of any great and good man, something of the qualities which are necessary to the attainment of true greatness and success, qualities essentially the same in all ages, countries and conditions of men.* * * *

Rush's father died when he was but six years of age, and his mother, left with a small estate and forced to provide for a considerable family, entered into business in Philadelphia. She seems to have been a very careful, thrifty and prudent manager, for she was able to give her sons a liberal education. An uncle of Benjamin, the Rev. Dr. Findley, governed an academy of high repute at Nottingham, Maryland, and to this excellent school Benjamin was sent at the early age of nine and received into the family of his uncle, who maintained toward him during the succeeding five years the triple relation of pastor teacher and father. In the highly moral and religious atmosphere of this school and home, were firmly established the excellent moral and mental habits which characterized Rush throughout his later career.

He must have been a diligent and precocious student, for at the age of 14, he was ready, not only to enter Princeton college, but to the advanced standing of the junior year. In college he was noted for his skill in elocution and debate, and many of his friends urged upon him that he adopt the profession of the law, as best adapted to the development and utilization of his exceptional talents in this direction. He found abundant use, however, for their display as a medical teacher, writer and controversialist.

Graduating from Princeton at the early age of fifteen, with the degree of A. B., Rush at once entered upon the study of medicine in the office of Dr. Redman, then the most eminent physician in Philadelphia, and remained with him six years. It is related of him that during this long period he was absent from his duties in the office but two days..

The Philadelphia Medical College (now the University of Pennsylvania) had just been projected when, in 1766, Rush, now at the end of his pupilage with Dr. Redman, was ready to complete his education by a course of lectures and clinics. He was forced, therefore, to seek from necessity what so many now seek

from choice or fashion, a course of medical study abroad. Edinburgh, under the domination of the great teacher, Cullen, was then the Mecca of the few American medical students who could afford the great expense of a journey there.

It is interesting to note the manner in which the recognized center of medical thought and learning has passed from one country to another during the past centuries. Perhaps the earliest and undoubtedly the greatest of them all was that marvellous center of all learning, Alexandria. Here flourished Herophilus and Erasistratus, the founders of anatomy; Demosthenes Philalethes, who wrote the first work on diseases of the eye, Zopynes and Cratevas, who improved the art of pharmacy, and invented antidotes. With the fall of Alexandria, the center of medical thought and activity was transferred to Rome, where Galen, himself an Alexandrian pupil, practiced, taught and wrote those doctrines which dominated the medical world for thirteen centuries. In Italy too was the torch of medical learning first relighted at the time of the Renaissance, by Vesalius, Servetus, Colombo, Caesalpinus and Fabricius. Thither Harvey journeyed to prepare his mind, acquire the knowledge and make the observations which resulted in his immortal discovery of the circulation of the blood. Sweden, under the inspiration of the great Linnaeus, the father of systematic Botany, and later the school of Leyden, under the great Boerhaave, and still later Edinburgh and London became successively the objective point of medically inquiring minds. Then Paris succeeded to this proud pre-eminence, and for the half century preceding the Franco-Prussian war, no ambitious medical student considered his education complete until he had walked the hospitals of Paris with Louis, who first distinguished typhoid fever as a distinct disease, with Laennec, the founder of physical diagnosis, Trousseau, the unparalleled clinician, and the many other great medical men whose genius shed lustre on the French school. The wonderful impetus given to the German universities after the founding of the German empire soon placed them in a loftier position, especially as to the medical departments, than those of any other country, and for the last quarter of a century the laboratories and hospitals of Berlin, Munich, Leipsic, Heidelberg, Vienna and other German centers have re-echoed to the footsteps of the medical students of the whole world. May not the near future witness another shifting of the medical center? Is it unreasonable to hope that with the rapid growth of everything pertaining to medical science and education in our own country in the last few years, a rapidity of developement surely not ex-

ceeded, if indeed it has been equalled elsewhere, America early in the new century may become in turn the medical centre of the world?

At the University of Edinburg Rush remained two years, receiving the degree of M. D. therefrom in 1768. From there he journeyed to London and spent the succeeding winter in the hospitals of that metropolis. * * * *

After a few months study in Paris. Rush returned home, having, though scarcely twenty-four years of age, spent nine years in the study of medicine. His preparation for the practice of his chosen profession was doubtless more thorough than that of any man of his day on this side of the Atlantic. He plunged at once into a life of ceaseless activity as a physician and teacher which continued without intermission until his death. His great talents and superior education were at once recognized by his appointment to the chair of Chemistry in the Philadelphia Medical College. * * His social standing, his wide acquaintance, his rare abilities, and more than all perhaps, his charm of person and manner, and manifest devotion to the interests of his patients, enabled him to command quickly a large and influential *clientele*, and he continued to enjoy, throughout his life, a very large practice. * * *

The wide range of his sympathy and interest in public questions cannot be better shown than by referring to the list of essays, literary, moral and philosophical, written by him at various times but brought together in one volume in 1798. Among them are essays upon a Plan for Establishing Public Schools; On the Mode of Education Proper in a Republic; Thoughts on Amusements and Punishment Proper in Schools; Thoughts on Female Educations; A Defence of the Bible as a School Book; An address to Ministers of the Gospel of every denomination upon Subjects interesting to Morals; An Inquiry into the Constancy of Oaths; A Powerful Argument against Capital Punishment; Thoughts on Common Sense; An account of the Views peculiar to the Indians of North America; Observations on the Influence of Tobacco upon Health, Morals and Property; An Inquiry into the Influence of Physical Causes on the Moral Faculty.

The years immediately succeeding the return of Rush to America were stirring times in the American Colonies. The Stamp Act passed by the British Parliament in 1765 had aroused the people of all the colonies into a perfect furore of antagonism to the British Government which finally culminated in 1770, the very year after Rush's return, in the so-called Boston

massacre. With the memorable historical events leading from this to the battle of Lexington in 1775, and finally to the crowning event of all, the signing of the Declaration of Independence, July 4, 1776, every loyal American is familiar. Into this exciting controversy Rush threw himself with all the fervid patriotism of his ardent nature. * * * *

“He was a member of the Provincial conference of Pennsylvania, and chairman of the committee to whom was referred the great question whether it had become expedient for Congress to declare independence. The report they made was adopted and went to Congress the same day. It is a most animating document, most probably written by Rush, as he was chairman of the committee and ever ready with his pen, and the committee consisted only of himself and Col. Jos. Smith. The report includes all that has been so much praised in the Declaration of Independence, of which it might appear to be the protocol.” * * * *

In this memorable year Rush was married to Julia, daughter of Richard Stockton, a fellow signer of the Declaration, and the union proved not only advantageous to the young man's present interests but a singularly happy and congenial one. The same year he was appointed Surgeon Gen'l of the middle department of the army, and later exchanged this place for that of Physician General. During his arduous military experience he made many useful observations, subsequently recorded in his writings and notably in his “Results of Observations made in the Military Hospitals of the U. S.” * * * *

In 1785 he projected and founded the Philadelphia Dispensary, personally soliciting the requisite funds. This benevolent institution was not only the instrument of great good to the poor of Philadelphia, but proved a prolific example for other cities. Indeed, it is to be feared in these later times, a too prolific example, for the dispensary abuse is one of the evils most declaimed against at the present day. He was the founder of the College of Physicians and Surgeons, the local medical society of Philadelphia, and the oldest medical society in existence of this continent. * * * It will be of interest to you to know, in this connection, that at the Centennial celebration of the founding of the College of Physicians, held in Philadelphia, in 1887, our own Professor Senn was one of the nine eminent medical men of America upon whom was conferred the distinguished honor of associate fellowship in the college. * * * *

It seems to me that in this regard, active interest

in public and political affairs Rush inculcates, both by precept and example, a useful and needed lesson, to the medical profession of to-day. There seems to be a prevalent impression that the peculiar duties of the physician relieve him from all responsibility in political and public affairs. This, surely is a mistaken notion, no citizen of a free country, whatever his vocation, can absolve himself from the duties of citizenship. Nor is it enough that he should passively go to the polls on election day to cast his ballot for candidates, often utterly unworthy of his suffrage, who have been nominated in a caucus of self-seeking professional politicians. The recent exposures of rottenness dishonesty and incompetency in our municipal, and only to a lesser degree in our state and national governments, has abundantly demonstrated the dangers of political apathy and inactivity on the part of the better class of citizens in a republican form of government. It is the plain duty of every citizen, without exception, to interest himself actively and energetically in the public affairs of his community and to see to it that his opinion and vote is effectively expressed both in the caucus and at the polls. This does not by any means necessitate that he should become a professional politician. On the contrary, if such a sentiment and interest were to any degree unanimous among the better class of citizens, the professional politician would soon find himself without a calling.

There is a further reason why physicians, as a class, should interest themselves actively in public affairs at the present time. In the marvelous advancement of the medical sciences of recent years, nothing has been made more manifest than that our hope for the future lies in Preventive as distinguished from Curative Medicine. The establishment of the germ theory of disease has led to the discovery of few, if any, remedial agents which can be effectively and safely used to combat these microbic pests after they have once invaded the human system. It has been proven beyond question, however, that diseases and even epidemics can be prevented by destroying the germs or debarring their access to the body, and better to the community. If this knowledge is to be of service to us in preventing disease it must be largely by legislative enactments; by the institution and enforcement of such regulations of quarantine, of milk, water and food inspection, of the proper disposal of excreta, of rigid cleanliness in all our surroundings, as have been or may hereafter be demonstrated to be necessary to the accomplishment of those ends. And who is to

educate public opinion in this regard; who is to secure the enforcement of these laws, if not the physicians? And in order to bring about the consummation of these desirable ends, mere advice and counsel from the medical profession, will not, to my mind, suffice. Its members must actively seek the election to legislative and executive office of those whom they know to be properly educated in these matters, and, oftentimes the only proper candidates will be members of the medical profession.

In this connection the faculty and friends of Rush college may take a just pride in the fact that this college is the first to propose and to institute a distinct course in State Medicine, a course which is first offered to graduates in medicine with the opening of the current year. It is destined, I am sure, to be of great value in educating the medical profession and through its members, the public, in the vital questions of public health.

* * *

At no time in his life did Rush manifest so supremely those surpassing mental and moral virtues which distinguished him above his fellow men, as in the terrible epidemic of yellow fever in Philadelphia, in 1793 and 1797-98. This wholly new disease, to the doctors of Philadelphia, spread terror and consternation throughout the community, and, to their shame be it said, many of the leading doctors fled the pestilence as from the wrath to come. Thus the number of patients falling to Rush and his few courageous fellows who remained, was multiplied. How enormous, almost overwhelming, were his labors in this awful time, we may judge from the following brief account of his experiences. For upwards of six weeks he did not taste animal food or fermented liquor; he abandoned all precautions and rested himself on the bedside of his patients, and drank milk and ate fruit in their sick rooms; he visited over a hundred fever patients daily, and his house was filled with the poor whose blood, from want of sufficient number of bowls was often allowed to flow on the ground; he lost his sister, who had courageously refused to leave him, and within an hour of her death was in his chaise driving to see patients.

In the following year he published an account of the epidemic which elicited unstinted praise all over the world. Among other high compliments; Dr. Trotter pronounced it "the best history ever written of an epidemic." * * *

On the evening of April 13, 1813, his friend Dr. Mease visited him and found him, with pen in hand, and to his query "What, doctor, always at your studies?" Rush replied, "I am

revising a lecture, for I feel every day more and more like a dying man. I am not indisposed, but I deem life at my time of life particularly precarious and I am anxious to leave my manuscript as perfect as possible. At nine o'clock that evening he was seized with a chill, spent a feverish night and awoke in the morning with a pain in his side. Notwithstanding the assiduous care of Drs. Dorsey, Griffith and Physick, who attended him he succumbed to the disease pneumonia typhoides, April 19, 1813.

The sensation produced by his death throughout the whole country was tremendous. "All who had heard of Rush and who were interested in medicine and philosophy, in common humanity or in the honor of their country felt they had lost a friend and benefactor. From one end of the United States to the other the event was productive of emotions of sorrow; for since the death of Washington, no man perhaps in America was better known, more sincerely beloved or held in higher admiration and esteem. For nearly 3000 years past but few physicians equal in greatness have appeared in the world, nor is it probable that the number will be materially increased for ages to come." * * * * *

At this point I trust I may be pardoned a digression while I allude to some of the advantages of this greatly extended course of study. It has made possible the systematic and orderly arrangement of branches in a graded curriculum in lieu of the single course of lectures repeated year after year which formerly obtained. The study of these various branches is thus greatly facilitated, the number of hours required in actual attendance at the college greatly lessened and more time made available for the careful consideration and digestion of the instruction imparted in lecture, clinic and laboratory exercise and for collateral reading.

Some time, too, may be profitably utilized for the relaxation of the mind and the exercise of the body in the various diversions. A larger and more enjoyable college life is thus made possible, such as was formerly to be found only in the literary colleges. Already this has been taken advantage of in our own school in the formation of the Athletic Association with its foot-ball and base-ball teams, and I trust soon to be added, an athletic track team, for this addition would tend to enlist the interest and encourage exercise on the part of a much larger number of students.

Music is another legitimate and enjoyable diversion which might be more enjoyably and profitably indulged in if a glee

club were organized under the direction of a competent instructor. I venture to propose for your consideration the formation of such a club.

More closely in touch with the regular line of work is another matter which has suggested itself to me—the formation of a society of senior and perhaps of junior students to study and discuss the current medical literature. The additions to our store of medical knowledge at the present time are so frequent, so numerous and so valuable that one to keep pace with them, to keep himself in the front rank of the profession, must of necessity be a constant reader of journals, monographs and brochures. Books are often almost out of date before they issue from the press. The ability to read intelligently and with discrimination the better class of medical journals is one which every student should acquire, and I know of no time or place where he can more suitably begin the cultivation of this talent than in the later years of his college course. * * *

Another valuable innovation which has been made possible by the lengthened time of study is the introduction of the many laboratory and practical courses now afforded. These have been increased from two to twelve in the last ten years. How the acutely observing, scientific spirit of Rush would exult in the opportunity thus offered for the cultivation of the student's power of original investigation. This, indeed, is the key-note of the modern system of medical education—*Original Investigation*. The bringing of the students into immediate contact with the thing itself rather than with somebody's description of it. He thereby, as President Coulter has happily phrased it, obtains his knowledge at first rather than at second hand. I would urge upon you that you make the largest possible use of the superior laboratory facilities here offered, to the end that you may become close, accurate and independent observers of facts. It is believed that the system of fellowships to be inaugurated this year, will be of great value in arousing and developing the spirit of original investigation in the undergraduate students.

* * * * *

Time forbids a more extended account of the work and worth of this great and good man. I regret the inadequacy of this brief sketch to convey to you a clear and full conception of his lofty character. Suffice it to say that by common consent he is acknowledged to be one of the greatest medical minds which this, or any country has produced, and his magnificent patriotism, his commanding abilities as a statesman, a physician, a writer, a teacher, a philosopher, a philanthropist constitute one of the immortal glories of the history of American medicine. Well may you be proud to bear away from here, as we trust you all may at the end of your course, a diploma, having inscribed at its head the illustrious and immortal name of Rush.

MISSED LABOR FOLLOWED BY POSTMATURE LABOR.

F. A. STAHL, A. M., M. D.

The term "missed labor" introduced by Dr. Oldham, "is applied to those cases in which a foetus, dying after the period of viability has been reached, * * Nature makes an effort at the normal time to expel the contents of the uterus * * the effort fails, and the pregnancy continues an indefinite period."

A better description of this condition and conveying a truer picture, is that rendered by Playfair, who states that "the term 'missed labor' is applied to an exceedingly rare class of cases, in which, at the full period of pregnancy, labor has either not come on at all, or, having commenced the pains have subsequently passed off and the fetus is retained in utero for a very considerable length of time." In Playfair's conception it appears that missed labor is an unsuccessful effort of Nature, at term, to expel the mature fruit; the fetal cases which he presents were fatal, yet, his language, as I take it, leaves room to believe that fetal death may not always follow. Following Oldham's conception, missed labor is an unsuccessful effort of Nature to expel a dead fruit at the normal time, and implies that there is always a dead fruit. Playfair's conception appeals to me as the more true.

I would define missed labor as a case of utero-gestation in which nature at term endeavors to expel the fetus, but fails through a want of proper parturient action; labor either does not come on at all, or having commenced, the pains subsequently pass off; the fetus is retained in utero beyond the ordinary term; the fetus may continue viable; it may die.

Whether the fetus live or die, is, in many cases, a matter of attention. Were the parturient attended by one recognizing the condition as one of missed labor, as soon as danger presented to the life of either the mother or the fetus, he would induce labor, it might be immediately following the missed labor, or some time soon after. Or were no attendant present, nature may still force, or endeavor to force, adaptation of the fruit with its mature or hyper-mature development to the "parturient canal and thus have expulsion occur with or without death of the fetus, as in the present case.

In either event there would occur a missed labor, an unsuccessful effort to expel the fetus at maturity, and sooner or later there would follow another attempt, a *post-mature labor*, that is labor occurring beyond the normal period. I take the liberty to suggest the adoption of this term, *post-mature labor*, as applied to labor taking place after the usual or normal period of maturity. The definition in weeks or days of course must depend upon the standard of maturity as recognized by obstetrical authorities. Von Winckel has simplified matters very materially in this respect by terming

Labor up to the 16th week as *partus abortus*;

Labor from 16th to 28th week as *partus immaturus*;

“ “ 28th to 38th “ “ *prematuris*;

“ “ 38th to 41st “ “ *maturus*;

“ “ 41st — “ “ *serotinus* or late labor;
partus postmaturus

This latter term is certainly more definite than those usually at hand, as tardy, retarded, late, postponed or protracted labor. Protracted labor is sometimes understood to mean labor beyond term (a prolonged pregnancy), again it is defined as labor (parturition) prolonged beyond the usual limit, viz. ten to twenty hours in primiparae; two to six hours in multiparae. There can be as little confusion in the comprehension of the term *post-mature* as there is in the familiar term *premature*.

The case which is offered for consideration is one presenting an instance of missed labor followed by *post mature labor*.

The mother is a German-Bohemian from the Elbe valley, with a progressive sacral promontory encroachment upon the antero-posterior diameter. The present was her fifth pregnancy; two years ago she experienced considerable difficulty in giving birth to her previous, her fourth child, parturition at that time continuing several hours longer than usual. She noticed also that her pains on that occasion were more numerous and severe than in her previous labors, circumstances which her encroaching promontory would explain. The child at that time, she says, was about one half the size of the present neonatus; her former labors were normal. Her weight is 140 pounds; height 5 feet, 1 inch; other than the pelvis her physical development is normal. The husband is slight, of normal development, weight 130 pounds; height 5 feet, 5½ inches. She is intelligent and states that her last menstruation occurred March 15, 1894. I delivered her January 11, 1895, the pregnancy covering a period of 302 days.

When I called she stated that she had expected to be de-

livered about Christmas. On December 22, she experienced pains like she always had in labor, and retired to bed, believing herself to be parturient. After three hours of strong, regular pains, she noticed that the pains grew weaker and the intervals more protracted, the whole gradually ceasing. Thus it continued, marked only with an occasional pain, soon subsiding, until January 11, 1895, when after being eight hours in labor, I delivered her by turning and extraction.

Examination yielded a large abdominal tumor, implying a large fetus; a first position left occipito—anterior, with right parietal portion fixed above and in the superior strait. The parturient remarked that this was the second time she was trying to give birth to the child, mentioning the former attempt of December 22, and pleaded very earnestly that assistance be rendered her as she knew she could not give birth to the fetus spontaneously; she felt there must be something wrong, as in her previous parturitions the pains had not been so numerous or so strong, and that with the exception of the fourth labor, parturition had never extended over two hours. Internal examination further yielded the prominent sacral promontorium; the cervix was dilated; membranes ruptured and liquor amnii had almost wholly passed off. Caesarian section only would have assured a living child; this the parents objected to. I ruled out forceps (I have never met with a case where I considered symphysiotomy advisable) and decided rather to turn and extract-

As you can judge (*vide infra*), there was much difficulty experienced in the version and subsequent extraction. The first difficulty was encountered in the podalic version, the large, unwieldy body refusing to rotate, this difficulty being enhanced by the close contraction of the uterus about the fetus from absence of the liquor amnii; likewise much trouble was experienced in extracting the now incomplete footling, the giant body refusing to be drawn through the pelvis, to accomplish which required very powerful traction; likewise strong traction was necessary to deliver the large after-coming, extended arms.

When I commenced the turning the heart tones were already irregular. After the turning and when the after-coming head was at the superior strait, hoping to save the life of the child, I introduced my finger into the mouth, drew down the inferior maxillary and with back of hand and fingers endeavored to push aside the vaginal wall to permit air to enter the mouth. In this I was successful as the *vagitus uterinus* was very plainly distinguish several times, yet the attempt proved of no avail as the

immediate delivery of the head could not be accomplished because of the contracted anterior posterior diameter, 9.5 cm., and the increased resistance offered by the large size of the head with its premature ossification. Seeing that its life could not be maintained, to avoid if possible a necessary decapitation and craniotomy, I rested a while to permit of cephalo-pelvic adaptation. After an interval of some minutes, with the third attempt of the Martin-Wigand (Winckel) method of expression and traction, the head was brought through the superior strait, there was no difficulty in delivering the head through the pelvis. There were no tissues or articulations (fetal) fractured or disturbed. As was to be expected, the perineum lacerated to the third degree, the laceration extending fully an inch up into and through the anterior wall of the rectum. I was delighted to find there was no injury to speak of to the uterus, notwithstanding the version of the large foetus, the envelope like contraction of the uterus, the absence of liquor amnii and the imperfect chloroformization, (I was alone).

Being too exhausted, the rectum and anus were not united until the next afternoon, when in so doing another of Nature's manifestations of the "Law of natural selection" was observed. Notwithstanding the irregularly torn and lacerated condition of the parts, as they had been left, the edges of the rectum and anus had, during the short interval from three A. M. to four P. M., found each other, and union by first intention had established itself, though the other parts of the perineum and anterior vaginal wall were still in a chaotic mass. 'There is something in this choice of the cell for its neighboring cell—(a peculiar affinity?). Many times I have witnessed this tendency of a part to seek its correlative part, and especially in lacerations of the anterior wall of the vagina, where gravity would tend to draw the torn particle away from its proper place, yet if carefully observed, it will be seen to little by little approach or be drawn to its proper position and restoration follow. After catgutting the rectum and anus, and stitching the perineum, today, six weeks post partum, the rectum and anus are normal in function and the perineum well restored, with the woman about doing her 'housework.

The illustration presents the neonatus three days after birth. Unfortunately it became frozen, thus losing some of its rotundity. Its size and usual développements are, however, plainly evident.



Postmature fetus and secundines. Pregnancy 302 days.

MEASUREMENTS:

Fetus Head,	Diameters	c m
	Occipito frontalis.....	15
	Bi-parietal.....	13.5
	Bi-temporal.....	12
	Circumference occip. front.....	41
Trunk,	Diameter	
	Bi acromial.....	24
	Length (22 inches).....	56
	Weight.....	12 lbs. 8 oz.
Placenta and Secundines:		
	Weight.....	2 lbs.

Among the points of interest this case presents may be mentioned as follows:

On the part of the mother:

- I. The postmature (longer) duration of pregnancy.
- II. The missed labor followed by,

III. The postmature labor.

On the part of the fetus:

The unusual hypermature development.

The postmature or longer duration of pregnancy has often been the subject of dispute, being doubted by many. Medico-legally the post-mature or longer duration of labor is of great moment. Parvin mentions some very interesting phases of this question. Similar to the old Roman law, the Napoleonic Code fixes three hundred days as the maximum limit of pregnancy, legitimizing the offspring born between the one hundred and eightieth and the three hundredth day from the absence of the husband.

In this case I am led to believe my patient, since she is an intelligent woman and has no reason to conceal any information and has absolutely nothing to gain by a misrepresentation, and further that her statements are fully substantiated in the evidence as furnished by the neonatus, namely, in its hypermature development, and in its marked resemblance to its parents, therefore there is removed any and all doubt as to its paternity. Like all intelligent women and especially one who has given birth to children, she remembers the date of her last menstruation and from that date estimated the date of her probable confinement, at about Christmas. This is the rule adopted by most women and the rule she had followed in estimating the probable date of delivery in her previous pregnancies and with a result varying but a day or two from the date thus fixed; therefore in her case and also as established by the precedent followed in her previous pregnancies, the last date of menstruation became for her, her normal date to compute from.

Again, there are not a few women who can with quite a degree of certainty appreciate the time of their conception. Such a one is this. She tells me that she was quite certain as to the correctness of her computation in that she was not only aware of the date of her last menstruation but also that of her conception: Chronologically estimated we would have fixed December 19th as the probable date of labor.

The missed labor: She is not given to nervousness or hysteria. On the 22nd of December she experienced what previous experience taught her was labor. I questioned her about this particularly, having in mind a traumatic cause or a probable false labor. As an intelligent woman, having already given birth to four children, her testimony that she was in labor, that the pains (continuing three hours regularly) were not colicky,

etc., must be accepted as evidence having some weight, which, of course, is lost, if not substantiated by further corroborative evidence.

For such substantiation we must look also to the events subsequent to the labor, and there we find first, a contracted pelvis; second, an enormous, hypernormally developed neonatus (in itself the best evidence of a hypermature development); third, the large dimensions of the head with its premature ossification; and fourth, in consequence of these three, dystocia causes, the uterine exhaustion, induced by the unsuccessful effort at labor, three weeks in duration.

Disproportion between the fetus and the parturient canal, does not always result in failure of labor, but dystocia invariably results. In this case the large size of the fetus, which caused excessive dilatation of the uterus and consequently loss of contractive force, was the direct cause of the missed labor. At term there was present a greatly diminished uterine expulsive force opposed to an increased resistance from the marked disproportion existing between the larger dimensions of the fetus and the smaller dimensions of the contracted pelvis, and an unsuccessful labor resulted. This effort was followed by a period (three weeks) of recuperation in which continued maternal and fetal physiological function and growth was perfect. The time would come when Nature would make another effort to cast off its fruit and this time came on January 11th, the date of the postmature labor, when after eight hours of a natural effort, and the pains are again diminishing in frequency and strength, she is artificially delivered by turning and extraction.

The unusual size and weight of the neonatus (it must not be forgotten that there is nothing pathological in its development) proportionate to the parents and her previous neonati; its hypermature development with its premature cranial ossification; the marked resemblance of the neonatus to its parents coupled with the history of the case can lead, I believe, as has been mentioned, to but one conclusion, namely, that the case collectively presents an illustration of

- I. Postmature (prolonged) duration of pregnancy.
- II. Missed labor followed by,
- III. Postmature labor.

The unusual hypermature development of the neonatus: In this regard Cazeaux and Tarnier write: "The weight and length of the neonati have been wonderfully exaggerated in many cases; thus some are recorded of a yard or more in length and other

that weighed 18, 20, 24 and even 30 pounds. Their statements must certainly be great exaggerations for the most voluminous of 3000 neonati under my charge either in the Hotel Dieu or at La Clinique weighed 10 pounds and it was an enormous one. Mme Lachapelle states that of 4000 at La Maternité one only weighed 12 pounds."

There are quite a number of cases on record reputed as weighing above 12 pounds. Prof. Parvin mentions several such and Prof. Harris that of the Novia Scotia giantess weighing 23 pounds.

In the first week of infantile life there is a gradual loss of weight which is usually regained by the end of the second week. In explanation of this loss and also in explanation of the unusual development of this neonatus, I would offer the following:

The unusual development of the neonatus is due to the absence (while intra-uterine, three weeks) of the conflict of forces, especially reductive in effect upon the organism during the first week of infantile life; consequently there was no loss to its organism in energy, development and weight—what would have been the case had these three weeks been passed as a new born. This conflict of vital forces with those of its environments continues throughout life, and there is gain or loss in the physical continuity or termination of life, determinate as the forces of the one prove themselves the fitter to survive by overcoming the forces of the other. When, and sooner or later this is always the case, the vital forces are no longer able to overcome those of its environment, the physical declines and there is death; this is true of all life and in all of its forms.

Ponce de Leon, a devout religieux, recognizing this fact, hoping to restore this effective balance of vital force power over that of environment, set forth from Spain to seek his Eldorado, the Fountain of Perpetual Youth, in the wilds of Florida. Alas! It has never been found, even the Brown-Sequard "Elixir *du Vie*," and the Armour "Cerebrine," failing in that fondest desire!

Upon birth the neonatus finds itself forced into a wholly changed environment; from having been a parasite, it becomes a separate body depending wholly upon its own exertions for further existence. This conflict of forces, with its loss of energy and material was avoided in the case of this neonatus by its longer residence in utero, with its advantages of growth and development without particular effort on its part, there-

fore there was no loss to its physical, but a gain of what would have been the loss had it been born at term. However, even had it not been delivered, the time would have come when growth and life would have ceased, and the uterus cast off its fruit, either in whole or in part, by necrosis, absorption or mummification, yet, with ultimate casting off.

Aside from many instances which might be mentioned as occurring in animal life, analagous processes occur in other forms of life. Take the cherry tree and apple tree of the vegetable kingdom, for instance. When the cherries or apples are ripe, if they are not plucked or shaken off by the wind, some few remain attached to the branch, even though mature, ripe. As you continue your observation you notice that the cherry grows larger, appears more luscious and bulging as though ready to burst because of its fullness. Likewise with the apple, it too becomes bulging. If they still do not become detached, they soon show that life in them has ceased to exist, either they dry up and shrivel or they burst, rot and disintegrate while still clinging to the branch. Finally they are shaken off. The human process is very similar.

FOREIGN BODIES IN THE EYE.*

BY CASSIUS D. WESCOTT, M. D., Chicago.

One of the commonest accidents to the human body is the getting of a foreign body into the eye and railway employes and passengers are naturally particularly liable to these accidents and the railway surgeon is consulted in regard to the effects of foreign bodies of all sizes and kinds. A mote in the conjunctival sac may often be followed by almost no unpleasant consequences whatever, but when, as sometimes occurs, a number of pieces of glass, or metal, or wood and especially hot cinders find their way into the eye at once, it is very easy to overlook one or more of the masses in the retrotarsal folds and the eye may be very seriously injured in consequence. It is therefore best in such cases never to be satisfied that we have removed everything until we have literally turned the conjunctival sac inside out. When the eye has been thoroughly cocaineized this is easily done by everting one lid at a time and then with thumb or finger on the globe forcibly turning it

*Read at the eighth annual meeting of the National Association of Railway Surgeons at Chicago, May 1, 1895.

up or down in such a way that the retrotarsal folds are completely obliterated or straightened out. I have more than once removed quite considerable masses from these hiding places which were not at all visible when the eye was opened and the lids everted in the ordinary way. When the surgeon has completely obliterated these folds and uncovered the foreign bodies, an assistant may render valuable aid in their removal by directing a small stream of water or a solution of boric acid upon the part or gently brushing the masses away with a little cotton swab.

It is always wise I believe to prescribe a collyrium consisting of a saturated solution of boric acid to be used by the patient two or three times a day for a few days after an accident of this sort. It certainly relieves irritation and may remove any infection which has been carried into the eye by the foreign body.

R	Acidi Borici	gr. xxx.
	Aquae bulliens,	℥ ii
	M. et filtra.	

Sig. Apply in eyes two or three times a day.

Hot cinders and molten metal frequently burn quite deeply into the conjunctiva. After they have been removed under cocaine and the eye thoroughly cleansed with a bland antiseptic, a small quantity of sterilized vaseline or olive oil dropped into the eye is very soothing and grateful. It is usually not best to bandage an eye thus injured, but the lids should be frequently bathed with warm borax water and the eye flushed with a saturated solution of boric acid every three hours. It may also be best to apply iced compresses or a wet boric dressing for the first twenty-four or forty-eight hours. If the latter is used it should not be heavy and should be frequently renewed and the lids annointed with borated vaseline. In all cases of painful injury of the eye the general surgeon is prone to prescribe cocaine as an anodyne. The practice is not justified either in theory or by the results obtained and should be condemned. Dr. Carl Koller, to whom we are indebted for the discovery of the anæsthetic properties of cocaine, says in a recent paper read before the Manhattan Medical and Surgical Society of New York:*

“The use of cocaine as an anodyne in painful ulcers and erosions of the cornea is very common, but cannot be justified either by practice or by theoretical considerations. The anæsthesia produced by cocaine instillation lasts a very short time—hardly ten minutes—and the reappearance of sen-

*New York Medical Journal, March 30, 1895

sation is accompanied by the reappearance of pain, so that the instillation would have to be almost continuous to be efficient. But this would be the slightest objection. It can be shown that the use of cocaine in corneal affections is positively harmful. Cocaine is a general protoplasmic poison, as more recent biological researches have proved; it first stimulates the protoplasm and afterwards paralyzes it, prolonged and repeated action finally causing mortification. It is very easy to demonstrate that repeated instillation of cocaine into an eye causes a general slight haziness and dotted erosions of the corneal epithelium. I noticed these phenomena in my first experiments with cocaine, and was at first inclined to ascribe them to dryness and evaporation, due to arrested secretion of tears and diminished winking of the lids brought on by local anæsthesia. But a series of experiments undertaken on rabbits established beyond doubt that although dryness plays some part in the haziness and exfoliation of the epithelium it is chiefly due to necrosis of the epithelium brought on by direct action of cocaine."

Iced compresses will usually relieve the pain in these cases if so applied that the cold is continuous. They should be prepared with great care and handled only by aseptic fingers. A good method is to cover a clean piece of ice, contained in a clean porcelain dish with powdered boric acid. The fluid resulting from the melting of the ice will be an iced solution of boric acid and a compress moistened in this cold solution and applied every five or ten minutes to the closed lids will relieve the pain wonderfully and promote the healing process.

The ulcers which follow injuries to the conjunctiva are always important because of the adhesions and contractions which may result from their healing. We can limit the amount of cicatricial tissue by the careful use of bland antiseptics, but we cannot prevent the union of two abraded surfaces which are constantly in contact. We should make every effort to prevent infection, however, and thereby reduce the amount of scar tissue to the minimum. As there is more or less discharge in these cases it is quite undesirable to apply a bandage but the eye should be protected from strong light by dark glasses and my own practice is to have the eye thoroughly flushed with a saturated solution of boric acid three or four times a day; at night the edges of the lids should be annointed with borated vaseline to prevent their agglutination.

Injuries of the cornea from foreign bodies are always important and demand our most serious attention and careful

treatment. Simple wounds of the cornea from foreign bodies and other sources if not infected usually heal kindly and without the formation of opaque tissue but if inflammation and ulceration follow we are sure to have leucomas or irregular and uncorrectable astigmatism produced which greatly interfere with vision. In our shops and factories all over the world employees are daily jabbing at the cornea with sharpened sticks, pocket knives, horse-shoe nails and other dangerous and destructive instruments in attempting to remove pieces of stone, steel, emery, etc., which are innocent as compared with the instruments and methods employed. If these offending particles are not deeply imbedded in the substance of the cornea they may usually be removed without the slightest trouble by simply wiping them away with the aid of a little swab made by twisting a small pledget of cotton upon the end of a wooden toothpick or similar instrument. The fibers of the cotton become entangled with the mote and it is dragged from its lodgment without any trouble and with no damage to the delicate structure of the cornea. This little procedure should be better known and if introduced into the workshops of the country it would save many cases of inflammation and ulceration of the cornea which result from the methods now in use.

Many times a foreign body in the cornea is so small or of such a nature that it cannot be seen until the cornea is viewed by oblique illumination or with the ophthalmoscope and these methods should always be called to our aid when there is persistent irritation from a suspected foreign body which cannot be seen by the unassisted vision. The consequences of a mote in the cornea depend largely upon the presence or absence of infection, but also upon the depth to which the foreign body is imbedded in the cornea. A mote which carries infection with it will naturally be much more liable to stir up serious inflammatory reaction than one which is sterile or nearly so. Before attempting the removal of a mote of any kind which cannot be removed in the manner already described, a few drops of a simple antiseptic solution should be instilled into the eye, after which it should be thoroughly cocainized and the foreign body picked out with a spud or needle with as little injury to the cornea as possible. After the foreign body is removed the eye should again be flushed with the boric acid solution, and if there has been much injury to the cornea it may be best to bandage the eye for a day or two. Sometimes a foreign body in the cornea will be so long as to protrude into the anterior chamber. In such a case it is necessary to pass a karatome

through the cornea and behind the foreign body in order to push it forward and prevent its falling into the anterior chamber. When the karatome is in place, if the foreign body cannot be picked out in the usual way with the cataract needle or spud, the wound may be enlarged and the extraction made with small forceps. Should a foreign body fall into the anterior chamber it should be removed at once by an incision in the sclero-corneal margin at the lower part of the cornea with a Graefe knife. If it does not escape with the aqueous humor it can probably be reached with the iris forceps. In all of these manipulations we should use great care to avoid infecting the eye, and once or twice a day it should be flushed with an antiseptic solution. A bandage should be worn until healing is complete.

I quite understand that no general surgeon will care to undertake such operations upon the globe of the eye if there is an eye man at hand, but it often happens that patients so injured are utterly dependent upon the general surgeon for aid and under such circumstances it becomes his duty to act promptly.

Every clean wound or ulcer of the cornea demands the application of a bandage and it should be so applied as to keep the lids gently closed without making pressure upon the globe. I am in the habit of applying first a layer or two of moist borated gauze, then dry borated cotton enough to fill up the inequalities and then the roller. The bandage is best made of white mosquito netting, which contains sufficient starch to keep the bandage nicely in place if applied wet, and the large meshes make it the coolest and lightest bandage which the patient can wear.

We must remember that micro-organisms which may be lodged in the conjunctival sac cannot be destroyed with certainty and the tying up of the eye, even with an antiseptic dressing, not only does not exclude them but rather tends, owing to the retention of the secretions to favor their development and multiplication. It is necessary therefore, to remove the bandage at least once a day and thoroughly cleanse the eye with a boric acid solution or a 1-8000 solution of bichloride of mercury.

When there is much discharge from the eye, from any cause, no bandage should be used but drainage encouraged by frequent cleansing.

Hot poultices are of great value in all severe cases of inflammation of the cornea and the healing of ulcers of this membrane is also greatly promoted thereby. The cornea is, as will be recalled, quite devoid of blood vessels but under the

influence of hot applications a more liberal circulation of lymph takes place in the lymph spaces of its substance. Antiseptic poultices are best made by saturating absorbent cotton or sterilized gauze in a hot solution of boric acid. It is not best to apply them continuously, but if used for half an hour, or an hour three or four times a day and changed every five minutes during the application, they are both pain-relieving and healing. They should be large enough to cover the brow and part of the cheek and as hot as the patient will tolerate.

Atropine is perhaps the most useful and most frequently used of all drugs employed by the ophthalmologist; but it has its strict indications and limitations and its indiscriminate use in every kind of eye trouble is to be condemned. It is unquestionably the best local anodyne we have in painful affections of the eye (except glaucoma) and because of its pain relieving properties and its effect upon the circulation it is of great value in the treatment of keratitis and corneal ulcers. It also happens that in all cases of inflammation of the cornea there is some congestion of the iris with tendency to iritis and closure of the pupil. Atropine as is well known dilates the pupil and paralyzes the ciliary muscle and thus puts the eye physiologically at rest and is the remedy par excellence for iritis. In the case of a central ulcer with threatened perforation atropine by dilating the pupil removes the danger of prolapse of the iris and adhesion to the cornea in case of rupture. The following is the usual prescription:

R Atropiæ Sulphatis gr. iv.
Sol. Acidi Borici (Saturatus) ʒ i.
M. Et filtra.

Sig. Apply one or two drops in each eye every three hours

In marginal ulcers which may perforate we can use eserine to prevent prolapse of the iris by firmly contracting the pupil.

Infected ulcers which continue to spread in spite of the bandage, hot applications and atropine can usually be checked by the use of the actual cautery. After thoroughly cleansing and cocainizing the eye, the speculum should be introduced, the ulcer wiped dry with a cotton swab and its surface gently seared over with a red-hot probe or an appropriate galvanocautery. A very good substitute for the cautery in these cases which I use very often is 95 per cent. carbolic acid applied by means of a firm cotton swab, great care being observed that the acid does not run and destroy healthy tissue. The tincture of iodine destroys infecting organisms almost as well and may be used in the same way.

Foreign bodies, after penetrating the cornea may lodge in the iris; they should always be removed without delay by an iridectomy which will include that portion of the iris containing the foreign body. The after-treatment of such a case consists of atropine and a bandage for three or four days. It is not necessary to confine such patients to their beds or to the darkened room but strong light should be avoided and they should not move about too much for the first day or two, after the operation. Even slight injuries to the crystalline lens or its capsule are followed by development of traumatic cataract whether the foreign body remains in the lens or not. The management of such cases depends very largely upon the amount of reaction which follows. If the swelling of the lens and co-incident inflammation are so great as to threaten immediate destruction of the eye extraction should be done at once. Sometimes the reaction is very slight and it is better to wait until it has entirely subsided before operating. Small foreign bodies may pierce the sclerotic or after passing through both cornea and lens may be lodged in the choroid or vitreous. If they can be detected with the ophthalmoscope and are magnetizable, they may sometimes be removed with the magnet; but if this cannot be done or the foreign body is non-metallic, the eye will probably require removal in order to avert sympathetic ophthalmia.

It is rare that a foreign body is tolerated permanently in the interior of the eye even though it become encapsulated. As a rule there is sufficient infection to excite a plastic or purulent inflammation of the iris, ciliary body and choroid, and such an eye is one of the surest sources of migratory ophthalmitis. It therefore becomes important to remove any foreign body from the interior of the eye if possible, and without delay or, if impossible to remove the globe at the first sign of inflammation; and as an eye which contains a foreign body which cannot be removed is practically lost to vision, and as inflammation almost invariably follows, I would be in favor of removing most of these eyes at once without incurring the great risk incident to waiting.

If the globe is not too badly injured it is often well to attempt to secure a more movable stump by performing the operation of abscision and evisceration instead of enucleating.

An artificial eye is always a ghastly thing and the more depressed and fixed in the orbit the more unsightly it is. This fact induced Miles and others to attempt the substitution of an artificial vitreous after evisceration. Modern aseptic technique is making this operation very successful and much less painful and distressing in its healing.

TYPHOID FEVER.

DR. D. W. ALDRICH, GALESBURG, ILL.

Read before the State Medical Society of Illinois.

It is not my intention to present an exhaustive paper on the etiology, symptomatology, abortive and general treatment, prognosis and morbid anatomy of typhoid fever. Neither am I presumptuous enough to say that it is modesty alone which forbids my giving you a literary entertainment or an intellectual feast. I intend only to present a few practical points regarding the abortive and general treatment of the disease in question. And, gentlemen, I hope you will kindly bear with me and treat me to all the honest criticism you may have in store for me in the discussion which my views may elicit.

In stating that it is my understanding that the typhoid bacillus is an important factor in the disease, I am aware that I state nothing new, but fully agree with the majority of the members present that the typhoid bacillus may be taken into the system through the mouth, the air passages, and possibly the skin, you will probably not dispute. That the spleen, liver and intestinal tract afford soil in which to incubate and develop a crop of the bacilli which may prove to be masters of the situation a few days or weeks later on, you may not object to. The bacilli developed outside the body and introduced after development, are possibly not the germs which when abundant and sufficiently developed may, by their industry, cause such changes of tissue as will present the typical typhoid fever symptoms.

Five to fifteen days may elapse after the bacilli are taken into the system before there are manifestations of disease, and one or two weeks before the germs are sufficiently active to produce a train of symptoms which force the patient to give up his calling and take the bed. I am aware that typhoid bacilli are artificially developed outside the body at a temperature as low as 70 degrees—possibly lower; but I imagine that these bacilli are puny, not well developed, and lack vigor as compared with those developed within the body at a temperature of 100 or 105 degrees. It is not my intention to discuss the artificial development of typhoid bacilli, but simply to deal with those which deal so unpleasantly with us. I am of the

opinion that even a temperature of 98.2 degrees is not a sufficient temperature in which to develop within the body bacilli sufficiently vigorous and industrious to destroy the life of the body in which they are developed. From the very nature of things it would appear that their development raises the temperature of the blood for the purpose of making the climate the better adapted to their development and growth.

Typhoid fever is a disease of many symptoms, or of few. Where the bacilli are not in any manner interfered with the symptoms are many, and severe in the extreme; but it is possible to interfere with the development and action of the bacilli in such a manner that their presence in the system is scarcely recognized by the symptoms they produce. It is for the purpose of bringing about this change that the physician is called in the case. Now, if you please, we will try to deal with the bacilli in such a manner, and at such a time, as to so distort the symptoms they produce, that even the skilled might fail to recognize them.

When but a small boy I learned from practical experience that a snake might be frozen stiff and when thawed out in the sun's rays, or in the backlog by the old historic fireplace, there would be a renewal of life in the reptile; and also that many of the lower animals would move about after a thorough freezing and thawing as well as before.

I also learned that there was a time when their eggs or germs were undergoing the changes necessary to produce new beings, the stage of incubation, when freezing or chilling was fatal to that would-be animal. Now we will take advantage of this fact in our abortive treatment of typhoid fever.

Now I suspect that some of you in my hearing are ready to rise and tell me that typhoid bacilli do not lay eggs, neither do they produce germs. With you I have no disposition to disagree, but will go still farther, and will allow you to christen the ptomaine as you will—call it anything you wish—it is an important factor in the disease, even if it is not christened.

Since August 1, 1890, it has been my custom, when called to see a patient of typhoid fever, if the stage of incubation was not past, to apply ice water or ice bags to the abdomen for a period of twelve or twenty-four hours, with a view to interrupting what I presume to be the incubating process; first using cloths wrung out of tepid water, gradually lowering the temperature, until at the end of an hour ice water or ice bags

may be made use of. Anything which has a tendency to increase the temperature of the blood nourishing the organs, furnishing soil in which the development is taking place, I suspect, aids the germ development we seek to destroy, thus perfect quiet is demanded, and on the other hand, anything which has a tendency to lower the temperature of the blood supplying those organs, even below the normal, perhaps may retard or even permanently interrupt such germ development.

In reading the experiments of others published in the medical journals, regarding the results of bathing in cool or cold water and the "Brandt Method," there seems to be a wide difference of opinion, but as I understand it by reading the reports, no wider than the difference in the stages of development of the disease in which they were used. One thinks he lessened the severity of the disease or even abated it. He used the chilling early—accidentally. Another thinks it had little or no effect. He made use of it late—accidentally. Both used it with a view to disinfecting the alimentary canal, destroying the germs already puny from chilling, to reduce the temperature; they also administer sulphate of magnesia to wash out typhoid bacilli and other noxious matters which may find lodgment in the alimentary canal. I find that by the use of these drugs we are able to accomplish still more; we lower the temperature; we dispose of tympanites; we cure the diarrhœa; the brown coating is removed from the tongue; the condition of the stomach is improved; the nervous phenomena attract very little attention; less morphine is required to secure the usual sleep; and we feel that we are master of the situation.

The old practice in typhoid fever of binding up the bowels I condemn, nor am I sufficiently gifted to make use of such language as the importance of the occasion demands. When the system is making an effort to rid itself through the alimentary canal of poisonous matters, our interest in our patient's welfare certainly demands that we do not by the use of opium, lead, bismuth, nitrate of silver or any other astringent interrupt the exit of such noxious matters. We should at least do no harm. But when the system is making a good fight in that direction, we should help the good work along by the use of that drug which turns out more fluid to the square inch of surface than any other—sulphate of magnesia. The more diarrhœa we have to contend with, the more poison there is in the system, and the more sulphate of magnesia is demanded.

If you please, I will contrast the symptoms of two patients in the same house,—one with the old calomel treatment, the

other, in whose case the chilling treatment was begun in the stage of incubation. Typhoid fever symptoms are already understood, and I shall not give an exhaustive list of them.

CASE NO. 1.—(*Calomel Treatment*). Loss of appetite; a feeling of languor and weakness; restless sleep; frontal headache; furred tongue; nose bleed; slight nausea; tenderness over abdomen; marked tympanites; diarrhœa; discharges offensive; slight eruption over abdomen; a rise in temperature to 100 or 101 degrees in the evening—a degree less in the morning (exclusion of every other disease); patient takes to bed; subsultus tendinum, and other nervous phenomena present becoming more prominent each day; mental aberration; fæces and urine unconsciously discharged; emaciation and bed sores; intestinal hemorrhages; perforation and peritonitis—in fact, all the symptoms become more and more exaggerated until dissolution. I have mentioned a few of the prominent symptoms of the disease as we meet them when uninterrupted by treatment. Nor have our old ideas of treatment, which have always been in an unsettled condition, ever aided us in so changing the symptoms as to warrant a doubt or dispute to arise concerning the nature of the disease. Let us now examine

CASE NO. 2.—(*Chilling Treatment Used in Stages of Incubation.*) Early symptoms same as in Case 1. The patient takes to bed and is chilled; sulphate of magnesia, carbolic acid and iodine administered: temperature normal, and does not rise above 100 degrees. Symptoms gradually disappear, convalescence in one week from time of chilling.

Regarding the nourishment of a typhoid fever patient, it is my belief that no other nourishment equals milk. I would prescribe it in measured quantities and at regular intervals. I know that beef tea and many other articles of diet are given during the course of the disease, but they are not, in my judgment, in any way equal to milk as a nourishment, and they do the serious harm of keeping a certain amount of milk out of the stomach, consequently their administration is of doubtful utility. I am aware that patients are met with who have an inbred conviction that they cannot swallow milk, and who feel that their stomachs would rebel against it even when in health.

Since August 1, 1890, with one exception, I have fed 182 patients of typhoid fever on milk alone. The exception was a case in which beef tea was administered by the nurse with a view to rendering invaluable assistance to the physician. The poor fellow died. The 181 recovered. The bill of fare may

seem curtailed and somewhat lacking in variety, but to break the monotony, the patients were allowed to take their milk hot or cold, as better suited their tastes. Other articles of diet were proscribed. Nor was the stomach alone utilized for purposes of nutrition. Rectal feeding was resorted to in many very weak patients. However, the same article of diet, milk, with the addition of a small amount of brandy, was alone made use of. Later in the disease, in some cases, oils were rubbed into the skin at regular intervals, and in sufficient quantities to aid very materially in upbuilding the system.

LOCATIONS.

A good location for a Catholic doctor, town of ten or twelve hundred inhabitants. For further information address H. W. Christian, Odell, Ill.

Town of 1,300, fine farming community adjoining, practice worth \$2,500 per annum. Physician disposing of practice desires to take post-graduate course. Fine opening for young man with a knowledge of German. Address J. W. Osborn, M. D., Dyersville, Iowa.

Graduate of '89, desiring to take post-graduate course, offers an exceptional location, Growing town of 600, 30 miles south of Springfield, 80 north of St. Louis, on Bluff Line R.R. Really an excellent opening. For particulars address C. E. Hill, M. D., Modesto, Ill.

For information regarding good location to practice medicine, address C. P. Wikoff, M. D., Mazon, Ill.

C. S. Corey, prescription druggist, Lehigh, Iowa, desires very much to communicate with some first-class man, who would locate at his place. Thinks he can assure him a good thing.

PEDIATRIC CLINIC.

(Rush Medical College.)

PROF. A. C. COTTON.

Reported by R. W. Holmes, M. D.

INCONTINENCE OF URINE—Enuresis Nocturna.

Male, aged 6 years. This little boy is brought to the clinic on account of nocturnal involuntary evacuations of his bladder. We learn this abnormality has existed for about a year, and often the urine is voided two and three times. Previous to three weeks ago the little fellow would have diurnal loss of control of the sphincter vesicae; but within this time has been free from this condition while up and about.

The mother informs us the urine is high-colored—odorous.

A child suffering from this disease is continually placed in unhygienic conditions by the wet surroundings: the irritation of the skin about the genitalia due to the wet clothing aggravates the disease; the mind of the boy is affected, he is bashful, morose, thinking every one must know of his pitiable plight. Thus he is mentally debased. You as practitioners, must impress upon parents that it is not the fault of the child that this condition exists—it is a manifestation of disease. and as such must be treated by parent and doctor. Too frequently children with this trouble have been needlessly punished for what was beyond his control.

Causes: In about 90 per cent. of children there exists a hyper-acidity of urine; this causes an increased sensitiveness of the cystic mucous-membrane. Cystitis may supervene, with all its train of symptoms, of which one is involuntary urination.

At this point let me impress upon you the importance of not looking upon incontinence as a disease; it is a symptom—always seek the *cause*.

Genital irritation, especially in boys, is a fruitful source of incontinence. In this category may be classed preputial stenosis, that condition in which the skin is so contracted about the glans that retraction may not occur—phimosis. This often is a precursor of accumulations of smegma preputiæ about the corona. This secretion hardens, emits a foul odor—many undergo putrification—may have a deposition of earthy

salts. The last appear in typical cases as pearly white, firm concretions, adherent to the mucous membrane; they may, and often do, cause cystic contractions.

Thread worms in the rectum, accumulations of fecal matter in the lower bowel, reflexly cause incontinence. As a sequence to these irritations priapisms occur for which the boy finds relief in masturbation.

Incontinence occurs in girls as well as in boys, but with perhaps less frequency. Vaginal or vulvar irritations operate in the same manner as before enumerated.

In this case no stenosis is found—the foreskin is easily retracted—until a part of the glans is exposed. Then an obstruction is met with in the form of fine adhesions between the glans, just anterior to corona and the preputial mucous membrane, they require some force to free them and are productive of pain, as evidenced by the child's cries. With the prepuce retracted we note slight signs of smegma, and at these points about the corona we notice firmly adherent concretions, plainly visible on the reddened glans; they present themselves as white, almost opalescent bodies about the size of a pinhead, or little larger.

First: Seek preputial irritation.

Secondly: Ascertain if there be hyper-acidity of urine—any abnormality of urine.

Thirdly: Examine rectum.

Treatment: Increase secretion of urine, flush out urinary system by copious draughts of water, by alkaline diuretics. Such diuretics as potassium and sodium citrates, acetates, lithia, potassium bicarbonate, which will produce diuresis and at the same time neutralize the urine. An agreeable form of lithia is the effervescing, put up both in powder and tablet form. In fact, effervescing potassium salts are now obtainable; preparations both active and agreeable to take.

Lessen sensitiveness and reflex irritability by mydriatics hyoscyamus, belladonna, stramonium and bromides.

For example: Ext. hyoscyamus gr. $\frac{1}{4}$ in metal suppository.

In this connection, position while in bed may be mentioned. Some children when sleeping upon their backs have incontinence, have relief when sleeping upon the side and *visa versa*. This is not true in many cases—perhaps in the majority of cases—is not true. Change in the recumbent position as a rule does not produce marked benefit.

In some cases of higher sensitiveness of the bladder, ele-

vation of the pelvis by placing a hard pillow under the hips, thus draining the trigone, amelioration is often secured. You all know the trigone is the most sensitive portion of the urinary bladder.

Referred to the surgical clinic for circumcision.

RANULA: Pertussis.

Female, age $1\frac{1}{2}$ years. Our next patient is this girl baby. The mother for some uncertain time has noted the development of a swelling under the tongue. The elevation of the tongue due to this swelling has interfered with proper suckling! breathing has been somewhat more difficult. The child keeps its mouth open in its endeavors to get the proper amount of air to its lungs.

On examination a fluctuating swelling is observed on the floor of the mouth, rather latterly situated, more prominent on the right side. The tumor is cystic, and is about the size of a hazelnut. Is a *ranula*.

Ranulæ may form from the occlusion of the duct of a sublingual salivary gland, or from a mucous gland in the floor of the mouth, or the under surface of the tongue; it is a true retention cyst. They are harmless and only cause inconvenience from their size. In addition to the inconvenience of deglutition and hindrance to respiration, later this child will have an impediment of speech unless removed.

Treatment: The treatment may be divided into that of local applications, and operative procedure. Irritating injections, as of carbolic acid (95 per cent.), pure tincture of iodine, have been recommended and used with more or less success. With the same idea in view—to set up a plastic inflammation—for many years setons have been used, where direct operative interference is not instituted.

Cauterizations with either the electro or paquelin cautery are useful.

In the use of the knife all the glandular structure must be removed if any of the actively secreting cyst wall is left recurrence is the rule.

In this case the introduction of the seton is recommended.

However the most marked sign of disease in this child is a spasmodic, laryngeal, croupy cough, characteristic of *per-tussis*

The course of the disease is insidious. At the onset there may be a slight coryza, a slight pharyngo-laryngeal catarrh; the catarrhal symptoms seldom descend so as to involve the bronchi. At first the parents think the child has “caught a

cold." In the course of a few days a cough appears, slight at first, growing in intensity until at the termination of two or three weeks it reaches its height. The cough is characterized by a hoarse throaty, spasmodic quality. The spasm grows more severe, ending in a deep inspiration, sometimes crowing in character—the whoop. The gagging with which the paroxysm terminates may bring on emesis; mucus streaked with blood may escape from the mouth and nostrils.

Vomiting may occur so often that starvation threatens the life of the child; it grows emaciated so that rectal alimentation is necessary.

In the paroxysm the face becomes red from the exertion; during the whoop, the chest being fixed in inspiration and the muscles tense, cervical venous circulation is retarded, the veins swell and become prominent, and the face and neck are cyanotic. This venous engorgement favors epistaxis.

Usually paroxysms do not occur more often than five or six times in twenty-four hours; occasionally they recur so frequently the child goes from one attack into another until completely exhausted. This is rare.

The fit of coughing is brought on by faucial irritation; oftentimes a child in a paroxysm may start other children with the same disease, in close proximity, into an attack of coughing.

As a sequel to whooping cough we often meet with enlarged bronchial glands. Often times rachitis, "strumous diathesis" dates its appearance to pertussis. The first sign of the disturbance is the presence of adenoids. The mucous membranes, show signs of malnutrition.

Among the first signs of this diathesis are malnutritions of the skin and its appendages, the hair and nails, affections of the mucous membrane and the development of adenoids.

Whooping cough in itself is not fatal; its most severe complication is broncho, pneumonia, and the greatest source of its mortality.

Treatment: There have been many drugs lauded as specifics for pertussis; the large number of such remedies attest to the fallacy of such assertions. The treatment now before the profession which has stood the test of time is to allay spasm, to lengthen the intervals between paroxysms; it is palliative, not curative, strictly speaking.

Local applications in the past have been much praised, but practically of little avail. Quinine a few years ago was much in favor, but has been relegated to the past.

To allay spasm the mydriatic group and the bromides are the

most popular and the most efficacious. The tinctures of belladonna and hyoscyamus may be given in doses of m. v-xx, to a child of this age. You all have heard repeatedly that children bear mydriatics well. The bromides may be exhibited in doses of gr. i-v.

Bromoform, analagous in composition to chloroform, is a new remedy which, in the hands of many, has markedly benefited the patient; dose for this child m. iij in an ounce of water, repeated three or four times in the day.

The popular belief that whooping cough contracted in the fall is more serious than in the spring and summer is well founded for the reason that in the former season complications of bronchitis and broncho-pneumonia are of much more frequent occurrence.

In conclusion let me urge you never to recommend exposing a child to whooping cough, to have it over with. It is a dangerous practice.

A RARE CASE.

EDITOR CORPUSCLE:

Having the permission of Prof. Etheridge I gladly accede to your request for a report of the interesting case from which the specimen shown recently, was obtained.

The patient in question, colored, aged about 30 years, applied to Prof. Etheridge for relief, or information concerning a rapidly growing tumor in the pelvis. On examination by palpation this was felt to be very freely movable, connected with the uterus, practically symmetrical as regards the halves of the abdominal cavity, and, bearing in mind the fact that the colored people seem particularly prone to develop fibroids, a working diagnosis of uterine fibroid was made. The examination per vaginam revealed a cervix somewhat softened, a trifle enlarged, and to visual examination it appeared bluish. Lying almost against the sacrum was a nodule nearly the size of an English walnut, which was attached to the uterus posteriorly and low down. This was unmistakably fibroid. The dimensions of the uterus were about those of the normal multiplied by ten.

Questioning the patient revealed that she had amenorrhœa at the time for the last menstrual flow. There were certainly no definite signs of pregnancy. The softened and enlarged cervix has been observed in pathological conditions the bluish color might arise from a varicosity of the cervix supply from

the increased vascularity accompanying the development of the fibroid, or from an approaching menstruation; the amenorrhœa might easily have been a coincidence; the doughy feel of a tumor is not an altogether unknown thing with a fibroid, and on the other hand there was the little tumor posteriorly concerning which no mistake could be made.

But over it all there was an indefinable something causing Prof. Etheridge to think of pregnancy and finally to decide that here was a uterine fibroid and a pregnant uterus as well.

He advised an hysterectomy on these grounds. The mother could not carry the foetus to full term. In the event of the death of the foetus with the following abortion the mother would be exposed to the dangers of septicæmia. In delivery of the foetus, too, a terrible hemorrhage would occur, for while the degenerated uterus would not dilate well neither would it contract, and the tortuous and hyperplastic sinuses would pour out their contents in tremendous gushes, hurrying on a fatal issue perhaps, before the uterus could be packed with gauze.

The patient acquiesced in his decision and an abdominal hysterectomy was done. Nothing unusual occurred during the operation and the section of the specimen revealed, as you know, a foetus of about one month in the cavity of the uterus. The membranes were taken out intact, and coming as it did, a confirmation of the diagnosis made under so many difficulties, it made a specimen of more than ordinary interest. C.

INSTRUCTORS' ASSOCIATION BANQUET.

On Tuesday evening, October the 8th, the Instructors Association gave a banquet at the spacious rooms of the Chicago Athletic Club. A sumptuous twelve-course dinner was served and the choice viands were heartily partaken of and much enjoyed by all. The Association was honored by the presence of our beloved president, Prof. Edw. L. Holmes, who occupied a seat at the head of the table. Prof. E. Fletcher Ingals was also the guest of the association and near him sat Prof. John M. Dodson, who likewise had favored the association by accepting of its hospitality. Prof. Cotton, Prof. Hektoen and many others partook of the bounty provided, and much enjoyed themselves, for it was a most successful affair in every way. The gastronomic feast having ended, cigars were passed and chairs pushed back and then began the intellectual feast. Chairman John Edwin Rhodes introduced each speaker in

many neatly turned phrases and reflected great credit on himself and the Association. President Holmes the first speaker said in substance as follows:

"MR. CHAIRMAN AND GENTLEMEN OF THE INSTRUCTORS ASSOCIATION OF RUSH MEDICAL COLLEGE—I am much interested in recitations and their proper management. The calling of the teacher is a most honorable and responsible one and every man on whom that honor rests should feel that he must do his best to merit it. I take also a great interest in manual training, that is, the careful and dextrous handling of instruments, which branch of instruction is at present so efficient in this college. Every year brings great improvement in our methods of teaching and it is with much interest that I look upon the steady advance which is being made by our college teachers. Their constant aim and idea must be to impress the student with the strong sense of honest and conscientious effort and to so direct and strengthen those efforts that they will meet with success. I depend upon our instructors to make their work so interesting, pleasant and popular as to attract students from all over the world to our splendid college."

Amidst vigorous and hearty applause Prof. Holmes sat down and Prof. E. Fletcher Ingals was introduced. His remarks were in substance as follows:

"MR. CHAIRMAN AND GENTLEMEN—The Executive Faculty of Rush Medical College feel justly proud of their instructors' work. We all have that kindly feeling towards young men which was such a prominent characteristic of the late Prof. Henry T. Byford. These meetings favor the interchange of thought and therefore the general advancement of the teaching methods of all. I look for active aid from the members of this association in securing good deportment from the students, advancing the general interests of the college and promoting the fairness of all our examinations, I also hope that the instructors will discourage all boisterous actions, all smoking and anything which will in any way lower the standing of this institution. You are entitled to respect and obedience from all the students, and I would suggest that personal example and dignity is a most excellent way to suppress any infringement of the college rules. Another point I wish to speak of is that all important one of being punctual in the fulfillment of your engagements, remembering that if you are ten minutes late you waste the time of forty or fifty students which would amount to over eight hours."

Prof. John M. Dodson was then introduced. He said:

"If I were called upon at this moment to propose a toast it would be 'The New Spirit in Medical Colleges' typifying as it would that idea which the schools are at present carrying out of longer hours, more careful consideration of the subjects gone over, and increased diligence on the part of the students. The longer curriculum gives chances for better work allowing as it does time for exercise, which idea is being splendidly carried out by our Athletic Association. I hope, also, at no distant time to see a society organized for the reading and consideration of medical journals. Many of our books of the present day are old before they get into print and a knowledge of current medical journal literature is necessary for the truly advanced doctor."

Chairman Rhodes then introduced Prof. Cotton, who said that the one idea he wanted to emphasize was the function of a teacher, that is, to draw forth from the student's mind his knowledge of the subject in hand and to assist him in grouping central facts which could then be more easily memorized.

Prof. Hektoen then spoke of his recent experience abroad his observations of European students. He thought that the average American medical student was better equipped practically than the average European student and also said that he noticed with delight the great advance in teaching in Rush and that he hoped for the time when more original research work could be done. He also said that he would be pleased to see published reports of all the great clinical work going on daily in the amphitheatre at Rush.

The Association adjourned with the pleasant anticipations of a repetition about Christmas time of just such an enjoyable and useful meeting.

SAMUEL C. BEACH, M. D., Secretary and Treasurer.

NURSES.

We quote the following from "Medicine: Its Past and Future," an introductory address delivered at St. Thomas' Hospital, London, by Sir Edwin Arnold, M. A., K. C. I. E., C. S. I., etc.:

I have met in this great Palace of Pain gentle and graceful presences which lead me to allude to one more great and happy change among many, that has come upon your profession; I mean the education and employment of professional female nurses. A great physician once said in my hearing that the three most sovereign medicines he knew were hot water, fresh

air, and good nursing. In your fathers' day, gentlemen, we had no good nursing; we had Mrs. Gamp and Mrs. Betsey Prig, or else heavy-handed and heavy-footed male attendants, very different in mind and manner and influence from the lightly-moving and softly speaking woman, whose carefulness—inteligent, pitiful, but tranquil, trained and governed—now smooths every sick pillow, and carries out faithfully and fearlessly the ordinances of the doctor. I do not know whether you, the surgeons and physicians, or we, your patients in *posse* or *es*, are most to be felicitated upon this admirable revolution in the hospital ward and the sick room. There is no doubt that it was primarily due to the example of that most compassionate and noble-hearted woman, Florence Nightengale, who went at the head of a band of nurses, many of good birth, to the Crimean war and by demonstrating there and afterwards the immense advantages of skilled and high-class nursing, gave to her age the blessing of this modern system and to her sex a new, a suitable and a most honorable vocation. You have greeted the name of Miss Nightengale with instant and hearty applause. That generous tribute to her, who in her old age and retirement is even now the center of so much silent national affection, encourages me to remember that I am, after all, poet by nature and lecturer only by accident, and that in those dark hours of the Crimean war I wrote certain verses, which are perhaps brief enough to be on this occasion acceptable. If I am so bold as to revive them from their unprinted oblivion it is because what they express of admiration and gratitude is applicable in a great degree to every good and dutiful nurse, here and elsewhere, who loyally discharges this new and most womanly function.

The lecturer then recited the subjoined lines:

If on this verse of mine
Those eyes shall ever shine
Whereto sore wounded men have looked for life,
Think not that, for a rhyme.
Nor yet to suit the time,
I name thy name, best Viêtress in the strife,
But let it serve to say
That when men kneel to pray
Prayers rise for thee thine ear can never know,
And that thy gentle deed
For Heaven and for our need
Is in all hearts as deep as Love can go!
'Tis good that thy name springs
From two of Earth's fair things,
A stately city and a sweet-voiced bird;

THE CORPUSCLE.

'Tis well that in all homes
 Where thy kind story comes,
 And brave eyes fill, that pleasant sounds be heard,
 Oh, voice! in night of fear
 Like night's birds, sweet to hear.
 Oh Strong Heart! set like city on a hill.
 Ah! Watcher! worn and pale
 Dear Florence Nightengale!
 We give the thanks for thy good work and will!
 England is glad of thee,
 Christ, for thy Charity
 Take thee to joy when heart and hand are still.

 PHI RHO SIGMA.

About a year and a half ago there was formed at Rush a society known as The Ancient Order of Ananias. This organization was non-sectarian and non-political, without capital stock, and its object for social purposes and mental improvement. At first it was scarcely more than a quiz club, but as new members were added it was thought best to add a set of rules and provide stable accommodations for a goat. Many of the members were college men, a number of them from Greek letter fraternities, and the reviving of ancient memories always found clustering about a goat, brought new interest into the society. At first it was deemed well to give the rulers in Israel names patterned after those found in such organizations as the Independent Orders of Old Fellows, Ancient Order of United Brethren, Knights of Castor and Pollux, etc. Hence the first roster bore a Grand High Tapeworm, a Chief Diaphoretic, an Accoucher to the Papyrus. The fraternity flourished; new and good men sought membership therein. The fraternity life was such that no one was excluded on financial grounds. They did not seek notoriety, and did wait for fame to come to them; all their prayers for advancement as a fraternity were said in their closets, and not from the top of a tally-ho coach, assisted by long horns.

This was all very well, but the members felt that to become permanent it would be better for the fraternity to be allied with a more wide-spread society,—something not local entirely. But no move was made in this direction, as the members considered it more advisable in this instance for the mountain to come to Mahomet than for Mahomet to go to the mountain. Different offers were received but nothing met with unanimous approval until the Phi Rho Sigma, a Greek letter

medical college fraternity, proposed through its Alpha chapter—a union with itself, the Rush Chapter to be the Gamma chapter in Phi Rho Sigma. This proposition met with universal commendation, and on October 19, 1895, the amalgamation was completed, and the Ancient Order of Ananias became Gamma Lodge of Phi Rho Sigma, Gamma to retain the peculiar interests and aims of the A. O. A., adding to them the interests and aims of Phi Rho Sigma. No longer will the Grand High Tapeworm, as such, wield his baton of authority, no longer will the Most Reverend Drool multiply words without meaning—half he says. But the same old spirit will animate the men in the chapter; the same old idea will dominate, that one man is as good as another unless proved below him; that there is much to be learned during a medical course besides evading quiz masters; that while we should cherish the belief in the brotherhood of man, we may still have an inner or family circle where closer ties are formed than can be made by meeting daily in a lecture room. The students of Rush have looked without envy, and possibly with some admiration at the A. O. A. The Phi Rho Sigma is the same fraternity, with the same men, who cherish within themselves the same aims and aspirations. With malice toward none, with charity for all, whether fraternity or non-fraternity men, the Gamma chapter of Phi Rho Sigma makes its bow.

AMONG OUR EXCHANGES,

An exchange says a mind reader, having demonstrated to a party of young people his ability to read a newspaper through two thicknesses of horse blankets, one of the girls left the room with the remark that she “wasn’t going to stay there any longer with this calico dress on.”

* * *

THE RUSH MONUMENT FUND.

The Rush Monument Committee of the American Medical Association are working hard to increase the fund which is to be used for the purpose of erecting a monument to him in Washington.

The total of contributions to this fund amounts, to date (Sept. 23), to \$3,357.39. Recent donations to the amount of \$196 are acknowledged by the committee. Further contributions are earnestly desired, and may be sent to the secretary and treasurer, Dr. Geo. H. Rohe, Baltimore, Md.

Alumni Department.

JOHN MILTON DODSON, A. M., M. D., EDITOR.

MEMBERSHIP IN THE ALUMNI ASSOCIATION OF RUSH MEDICAL COLLEGE is obtainable at any time by graduates of the College, providing they are in good standing in the profession, and shall pay the annual dues, \$1.00. This fee includes a subscription to THE CORPUSCLE for the current year. This journal is the official organ of the Association.

Dues and all communications relating to the Association should be sent to
JOHN EDWIN RHODES, M.D., Sec'y and Treas., 34 Washington St., Chicago

'50—"I am trying to find the address, if still living, of Dr. Willard F. Coleman, who graduated at Rush in 1850." Rob't. W. Earll, M. D., Columbus, Wis. Will any Alumnus who knows of the whereabouts of Dr. Coleman, kindly inform the Secretary of the Association, Dr. Rhodes, in regard to it.

'77—Dr. Edwin M. Northcutt has recently removed from Chicago to Portland, Me., to become the Medical Director of the Union Mutual Insurance Co., whose headquarters are in that city.

'87—Dr. W. J. Davis is the proprietor of a drug store at Fremont, Nebraska.

'89—Dr. J. J. Looze is at Lincoln, Kewanee Co., Wisconsin.

'90—Dr. S. Eisenstaedt now has his office at 802 So. Halsted St., Chicago.

'92—Through the kindness of Dr. G. E. F. Anderson, Lebanon, Kan., we learn of the recent death (Oct. 8th) of Dr. J. H. Nettleton, who was one of the very creditable graduates of his class year. His death will be a surprise and a source of great sorrow to his classmates. We quote the following from a Brownsville (Oregon) paper:

J. H. Nettleton, M. D., the subject of this sketch, was born in Lewiston, Minn., July 4, 1864, and died in Brownsville, Oregon, Oct. 9, 1895.

Dr. Nettleton graduated from the Minnesota State Normal School and later from Rush Medical College April 30, 1892. After graduation he practiced in Nebraska about one year, when he came to Oregon, taking up his residence at Springfield, where by his diligence and skill he soon won the confidence of the people and built up quite an extensive practice. When he first went to Springfield he identified himself with the

Methodist Episcopal church, taking a great interest in all church work. He became known as a leader in society and in every phase of religious and moral reform. The undersigned was his pastor while he resided in the above named place and found him to be a true friend, a real helper to the pastor, loyal to all benevolences and needs of the church, ever ready to lend a helping hand, either with time, toil or money; in fact he was one of the most loyal true and faithful men I have ever known while in the ministry.

In March he took up his residence at Kimball, and was soon afterward elected county physician, filling the position with great credit and was re-elected for a second term. While serving in this capacity, he was married on Sept. 3, 1895, and with his bride, on that day left her home for Brownsville, Oregon, to reside in the future. Sept. 22, while attending church, he was taken sick, and after a brief illness of 16 days passed from labor to reward.

By the death of Dr. Nettleton, the world has lost a noble man, the church a loyal member and all who knew him a true friend and brother. He leaves a mother, two brothers, five sisters and a heart-broken companion, who was a wife but five weeks, to grieve over his untimely death. But they mourn not as those who have no hope; for they look towards that city whose maker and builder is God, where the inhabitants never of sickness complain and never see death any more.

REV. F. H. CALDER.

Dr. Geo. H. Shrodes, class of '91 has changed his address from Aberdeen, S. Dak., to 1621 University Av., S. E. Minneapolis, Minn.

'94—The following letter from Dr. E. B. McAllister, located at 1236 Wabash Ave., Terre Haute, Ind., will be of interest to his many friends: "Enclosed please find one dollar, my dues for '95, and do not fail to send THE CORPUSCLE. For the past seven months I have been roughing it in south central Kansas, Indian and Oklahoma territories, trying to brace up from the after effects of an operation for appendicitis. The Kansas wind has kissed my nose and cheeks, and my old strength returned."

'95—A very interesting letter from Dr. Wm. L. Crosby announces that he has "moved up from the south and is settled for keeps at Randolph, Nebraska. * * * Suppose 'Old Rush' is once more in full swing and regret that I am not on those old seats once more, (although I should have regretted it still more had I been 'plucked' and obliged to be there.) This is a 'Rush(ing)' town, as it contains Drs. John A. Dales, of the class of '90; also A. F. Miller of '92 and your humble servant of '95. Rush always and ever."

'95—Dr. H. B. Bartholemew, is located at 1468 South Pearl St., Denver, Colo., as he says "gazing at the mountains."

'95—Dr. J. E. Porter is located at Clark City, Ill., and would be glad to see any of "the boys" who might chance his way.

'95—Dr. C. E. Sargent has removed from Seymour to Pulcifer, Wis.

'95—The following letter from a last year's graduate will be read with pleasure by his numerous friends:

"Am located in above village with four other M. D.'s. Am doing as well as I desire for the present. Removed eight 'nasal mucous polypi' from one of my patients, according to perfect instructions received by brothers Corwin, Whalen and Beach. I also had the intense, if not agonizing, pleasure of resuscitating a new born, by Prof. Cotton's method, namely suction per small English catheter to remove all 'liquor amnii' and mucus, from bronchi and to then, according to Davis, inflate the lungs. Cannot THE CORPUSCLE be printed weekly or semi-monthly? It's an awful long time between drinks." Yours fraternally, FRANK J. HUIZENGA, Rock Valley, Iowa.

'94—We learn that C. J. Beise is located at Mapleton, Minn. He has had a good and increasing practice from the beginning, and is a deservedly popular physician in his community.

'85—We are pleased to announce the marriage of Dr. Ancil Martin, of Phoenix, Ariz., to Miss Miriam Talbot, of the same place, Nov. 12th, 1895. They will make their home in Phoenix, where we understand the doctor is doing exceedingly well. THE CORPUSCLE joins with other friends in wishing them well.

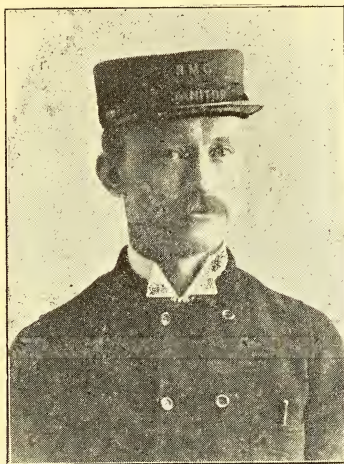
'95—Through the kindness Mr. W. C. Clark, Cairo, Ill. the corresponding secretary of the '95 class, we learn of the location of the following men of his class: W. F. McBride, M. D., Wabash Hospital, Springfield, Ill.; E. W. Zook, M. D., Y. M. C. A. Building, Peoria, Ill.; O. M. Layton, M. D., Metropolitan, Mich.; J. L. Fleek, M. D., Brodhead, Wis.; R. W. Durkee, M. D., Pleasant Prairie, Iowa.

'95—M. B. Parrish, M. D., was attending a few clinics at the college a few days since. As noted in an earlier issue, he is practicing at Peru, Ind.

GONE, BUT NOT FORGOTTEN.

There are few, if any, of the graduates of the college within the last decade of years, who do not remember the sub-

ject of the accompanying illustration, Mr. Adolph Erickson, the ever present "Adolph," general manager and director, for so long a time, of the *sub rosa* features of the college curriculum.



Long service in a particular line of work develops an ability, is said, to dispatch such tasks with a certain *sang froid*, and the open-eyed astonishment with which the new men at the college occasionally contemplated some of the maneuvers of our erst while janitor would lead one to think he had become an adept in his line.

Be that as it may, however, after long remaining at college Adolph decided to visit his native heath (at Hamneda, Southern Sweden), during the vacation of the past summer, and accordingly hied himself away, together with his family to "view the old scenes o'er." During his stay he forgot Chicago and its charms, the college and his friends, and became re-enamored with the Swedish soil and straightway proceeded to buy him a farm,—in size, equal to about 160 acres with us, and he therefore advised his friends of his intentions of turning farmer and not returning to the place of his many former victories.(?)

"And so, without much circumstance at all,
I hold it fit, that we shake hands and part."

His place in the college has been filled by Gus. Nelson, formerly head janitor at the Woman's Medical College, of this city, and our very efficient corps of five janitors still work on.

Athletic Department.

The past month has wrought a decided change in our college athletics. The Rush football eleven is no more, having lost its identity in the formation of a composite team, which holds at stake the good name athletically of both Rush and the University of Lake Forest.

Early in the season it was found that the schedule as prepared by the business manager of the Rush eleven did not justify the requisite sacrifice of time necessary to keep the team in practice, and the present dearth of good men in the University prompted therefore the organization of a team composed of the strongest men from each,—this aggregation taking up the schedule prepared by the University management.

The result of such an action can hardly be considered altogether satisfactory, since so many obstacles arise to cause annoyance and mitigate against successful work, still it appeared to be the only practical course open.

A few of the chief objections urged against such an arrangement were that each institution in such an alliance loses, to a certain extent, its personal identity, and the games are not favored with that spirit and sympathy which sustains and encourages a team, however unsatisfactory, of a single institution. Then, too, the difficulty experienced in bringing the members of the team together for frequent practice is also a serious drawback, and so far it has proven almost an impossibility to accomplish this task.

Despite these facts, however, the men have struggled along and so far met their schedule as arranged, with results which, though not excruciatingly pleasant to contemplate, are, considering the circumstances, not to be criticised. And the men concerned in the matter are entitled to great praise in striving to hold the team together during this rather exceptional year, since it is generally thought that if our various athletic organizations can be maintained for a few seasons that after a time they will finally enlist the support and encouragement of students and faculty alike, and with this done, such a departure for the college will be established as a fixture, and its development afterwards looked upon with the same degree of seriousness as in literary institutions.

The circumstances and conditions permitting professional students to engage in athletics, viz., lengthened term and increased number of years in attendance, are of such recent occurrence that it will of a necessity take some little time to adapt ourselves to the new *regime*.

The following are the games played and their results:

Rush, 0; C. A. A., 30.

Rush—Lake Forest, 5; University of Wis., 26.

“ “ 0; C. A. A., 30.

“ “ 10; Illinois Cycling Club, 6.

“ “ 0; Michigan University, 40.

“ “ 16; Orchard Lake Military Academy, 0.

“ “ 0; Northwestern University, 24.

“ “ 0; Illinois University, 38.

Although the above scores are not in themselves encouraging, it is a source of some satisfaction, nevertheless, to know that we can have some kind of football, if it isn't at all times of the successful sort, and we should all be prepared to experience an off year, as all schools do at some time in their history. So let us decide to refer to this as our "off year," and begin now to arrange for one of our eminently successful seasons in 1896-97.

We understand there are quite a number of very interesting games yet to follow, and we will still hope that "things may come our way" later. Among those of especial interest we learn of a game which the management are endeavoring to arrange between the men of Rush and the College of Physicians and Surgeons. Such a contest would enlist the best men in both institutions, and offer ample opportunity for the display of college spirit by the barrel.

ELECTIONS.

Senior Class Election.—The senior class had its first meeting Wednesday, Oct. 16, '95. The class was represented to the last man and a most satisfactory series of events followed.

At the opening the audience was entertained by the quartet of the senior class, Messrs. Beebe, Johnston, Smith and Brode, and in response to an encore rendered a selection in which the class yell played a prominent part. The senior class is to be complimented upon having such talented members. After an opening speech by the president of '95 the following officers were elected, the majority of them by the unanimous vote of the class:

W. L. Palmer, President; W. A. Metzger, 1st Vice-president; G. H. Vaupel, 2nd Vice-president; D. A. Orth, Recording Secretary; T. W. Gillespie, Corresponding Secretary; N. W. Culbertson, Treasurer; S. A. Edmunds, Valedictorian; H. A. Berry, Essayist; S. D. Beebe, Choir Master; E. A. Miller, Historian; T. F. Conroy, Poet; E. F. Witt, Chaplain; W. E. Richardson, Sergeant-at-Arms.

The constitution, after receiving a few amendments, was adopted as it stood, having served for the freshmen and sophomore years. The class may well feel proud of its gentlemanly president and its eloquent valedictorian.

SOPHOMORE ELECTION.

The class of '97 met Monday afternoon, Oct. 21, and elected the following officers:

President, M. R. Steward; Secretary and Treasurer, George L. McDermott; Corresponding Secretary, T. A. Kreuser; Chorister, Frank T. Bowman.

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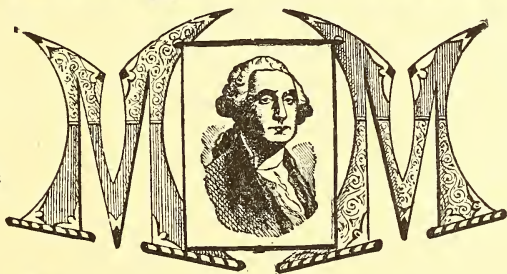
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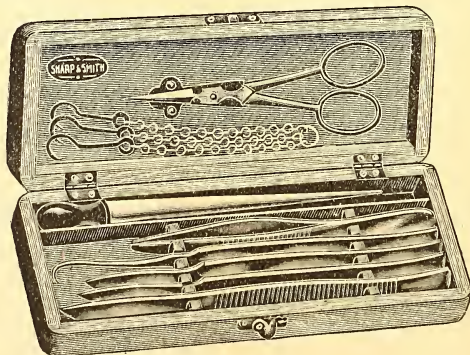
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The Corpuscle.

RUSH MEDICAL COLLEGE, CHICAGO, ILL.

MEDICAL DEPARTMENT LAKE FOREST UNIVERSITY.

VOL. 5.

DECEMBER, 1895.

NO. 4.

EDITORIAL COMMITTEE.

F. C. HONNOLD, '96, Pres.
E. M. ECKARD, '96, Sec'y.

J. E. LUCKEY, '97, Treas.
E. D. WHITING, '97.

Communications relative to advertisements and subscription (Subscription price \$1.00 per annum), should be addressed to the publisher. Remittances should be made by money order draft or registered letter payable to "THE CORPUSCLE," and addressed to Fred C. Honnold, 877 Jackson Boulevard.

RUBY RED AND BLACK: Colors of Lake Forest University. ORANGE: Color of Rush Medical College.

Looking to the annual re-organization of the editorial board of THE CORPUSCLE we are to lose this month one of our senior editors—Mr. Elmer M. Eckard, to be followed a month later, (after the January issue) by the departure from the board of Mr. Fred C. Honnold. The annual election will be held during the month of December, at which time men will be selected from the present Junior class to succeed the gentlemen retiring. In order to permit of a representation of all classes of the college, there will be a special election in May next, at which time a representative will be chosen from the '98 class, of which there is a small contingency in the college, and a year hence, December 1896, two men will be chosen from the '99 class—the present Freshman class.

THE CORPUSCLE board is anxious that all men desirous of a place among the editors of the college journal shall make themselves known by submitting articles on current topics of interest, of their own preparation, which we may use as a

guide in the selection of men upon whom later shall rest the burden of editing and conducting a magazine worthy of our Alma Mater.

In parting company with our late confrere, Mr. Eckard, the members of the board desire to express their esteem of his merits, and also their thanks for his help in the monthly production of the journal. We feel sure, also, that he has the thanks and well wishes of his classmates for his labors in their behalf as one of the representatives of their class.

HIGHER EDUCATION OF THE PHYSICIAN.

In a recent editorial in one of our current newspapers, an article entitled "our learned professions" gave some interesting statistics in regard to the proportion of college men in the various professions.

In olden times the educated men were entirely of the clergy. They in fact, were the only ones who understood the art of reading and writing. Later, after the establishment of the legal and medical professions, many men of superior education sought these callings. And to day not only are college men found in the professions, but in almost every line of life,

Statistics taken from eastern schools show that of theological students 66.8 per cent, are college graduates; of law students 36.4 per cent., and of medical students 23.9 per cent. As these figures show, the greatest mental culture undoubtedly lies with the theologian, and perhaps it should be so. There is however great opportunity for raising the standard of education in law and medicine.

This is to be accomplished in two ways: by encouraging and demanding increased preliminary training, and by demanding more thorough and extensive work after entering professional colleges. In the medical profession steps are constantly being taken towards these ends, as is seen by the introduction of more stringent entrance examinations which, we hope, will be increased in severity from year to year. The percentage of college men in our profession is rapidly increasing; we are steadily gaining upon our lawyer brethren, and al-

though we can scarcely expect to immediately surpass the theologians, we hope, in the near future, to equal them.

It has been but a comparatively short time since any decided steps were taken to lengthen the course of prescribed medical study. In 1893, twelve of the one hundred and thirty-six medical colleges of this country required four years attendance to medical lectures, while only four continued to graduate on two years attendance. The expiration of the present year will find a still greater number of these institutions that have advanced their requirements, and colleges offering less than a three year course will hereafter be things of the past. All this certainly indicates a highly gratifying improvement in medical education.

There are serious doubts in the minds of some of the most competent judges as to the advisability of lengthening the medical course beyond the present limit of four years, as established by the best schools. They take the ground that the greatest need is a much better preliminary training for the study of medicine. And it is certainly true that a great deal of valuable time is now wasted in trying to explain subjects that should have been thoroughly mastered before entering the study of medicine. Every carefully thoughtful student feels this. Double the results could be obtained from a class of thoroughly equipped men. The future will, no doubt, present some scheme for accomplishing more during the professional course proper.

Dr. John Madden, in the *New Science Review* suggests that the remedy for the present conditions is to be found in the general government assuming control not only of the sanitary affairs of the country but of the education of physicians. He recommends the appointment of a Bureau of Public Health, which shall be free from political patronage and have full power to decide the preliminary educational requirements before entering the study and to formulate a course of medical study; to say what laboratory work shall be done, and what hospital experience shall be had. This bureau should also examine all graduates before granting permission to practice

medicine, and all instructors of medicine before granting license to teach.

In the recent completion of the Dunham Medical College, located on Wood Street, between York and Polk, the Chicago Latin Quarter has been graced with another institution of learning.

The promoters of the new enterprise are, we understand, Ishmaelites from the Herring medical college, of this city, although from their declaration of principles in their announcement, just issued, we see no reason why the branch should leave the vine, unless some other factor than a difference of belief operates. Regarding their principles, they have the following to say:

"The Dunham Medical College believes that the art of healing, as taught by Samuel Hahnemann, to be the most rational and scientific yet discovered; it therefore adopts the Organon as its therapeutic guide. It recognize the law of similars as a law of nature, as perfect as any other natural law, and claims that the physician is successful in practice in direct ratio to the faithfulness with which its principles are applied, that Homoeopathy will cure what is cureable; that failures resulting in actual practice proves simply the limitation of human effort; that no law, natural or statutory, can be free from faults in execution. This is verified by all human experience; that law is the essential basis of all civilization and occasional errors in its enforcement proves nothing favorable to barbarism. Hahnemann's Organon was the first work that attempted a civilization of therapeutics."

This, and much more regarding the law of dynamization and the potentiated remedies instead of the crude substances, together with a declaration of their pride in the history of Homoeopathy as a distinct departure in the practice of medicine, would certainly indicate that the new school was indeed composed of true disciples of Hahnemann. The opening exercises, followed by a reception and a dance were held in the new building on November 15th. There are some 27 students enrolled.

The following subjects have been announced to the Sophomores, upon their choice of which they are invited to prepare theses in competition for the L. C. P. Freer prizes: "Malaria," "Tuberculosis of the Bones and Joints" and "The Surgical Anatomy of Mastoid Disease and Resulting intra-cranial lesions."

Subjects in the senior competition for the J. W. Freer prizes have not yet been announced, but will doubtless follow within a few weeks, before Christmas at latest, we hope.

These prizes are founded in the year 1894 by the generosity of Mr. Nathan M. Freer, of the Board of Trustees of the college, as a memorial of the late J. W. Freer, once a member of the Faculty, and Mr. L. C. P. Freer, who was for a long period of his life a member of the Board of Trustees.

The subjects of these prizes are offered in successive years by the several chairs represented in the Faculty, and in the order of the seniority of these chairs, and on subjects taught by each Professor. The senior prizes are offered and awarded by professors lecturing before that class, and on subject taught by them, and the junior prizes in course by the several professors engaged in the instruction of that class.

It should be the ambition of every man literally inclined in both classes to make their best efforts to secure one of these prizes, for laying aside the consideration of the honor and satisfaction of securing such a medal, the benefit derived from a thorough and earnest study of any one of the subjects assigned is of great benefit, and the ability to gather facts bearing upon such questions, arrange them methodically, logically and in a convincing manner, is a talent to be cultivated. A few such sturdy efforts, whether finally successful or not, help a student amazingly, and lead to certain if not immediate returns for energy so expended.

We are glad to note that the Alumni are waking up and hope that every man who goes out this year will leave his name and one dollar with the secretary. A better investment cannot be made for the fee includes the "CORPUSCLE," as the official organ of that body.

We are especially glad to note that there has been a class instituted in Medical Cooking, which includes four hours of practical work, under an experienced teacher from the school for trained nurses. This will be given in conjunction with the work in Materia Medica and is the only exercise of the kind given by a medical school, excepting that of Harvard.

We learn from the Secretary of the Alumni Association that more new applications have been received this year than any past year, and the prospects for the meeting in the spring were never so brilliant.

HOW WE INTEND TO CHECK SUBSTITUTION OF DRUGS.

Owing to the fact that substitution of drugs is practiced to a great extent, we earnestly request our readers to assist us in reporting to us all cases in which they may have been the victims of this criminal offense, giving the name and address of imposters, also all particulars to substantiate their statement, such as sworn affidavit, etc

We will expose in our columns the names of fraudulent dealers on receipt of satisfactory evidence.

All our readers will admit, that a doctor who prescribes a certain remedy expects that his prescription shall be filled accordingly. A druggist has no right whatever to use his own judgement in the matter, otherwise he places the reputation of the physician, as well as the life of his patient in jeopardy.

Feeling that all doctors, honest druggists, and manufacturers of legitimate preparations will be benefitted by our action in this matter, we solicit their assistance.

The above notice must be considered as a warning to druggists who believe that they are at liberty to substitute drugs.

THE EARLY TREATMENT OF INSANITY.

BY DANIEL R. BROWER, M. D.

Read before the Southern Illinois Medical Association, Friday, November 22nd, 1895.

I am glad to find that so much interest is being manifested by this Society in the important question of insanity. In my opinion too little attention has been paid in the past by our medical societies to the care and treatment of the insane, largely due to the fact that the general practitioner has not cared to treat this class of patients and has hurried them on to the specialist, probably, because he left his medical college without any adequate instruction in this subject and has not had the time nor the inclination in after years to make good the resulting deficiency. But today great interest is being manifested throughout the profession in this topic and our medical colleges abreast with the times have added insanity to their curriculum and at most of them sufficient attention is now given to its didactic and clinical teaching. So that the graduate now goes out with a fair knowledge of its etiology and pathology and well prepared for its treatment.

The distinguished Dr. Gray, for many years the superintendent of the Insane Hospitals at Utica, N. Y., studied his cases with reference to the capacity of their family physicians, and he found that a surprisingly small proportion of these patients came from physicians who were recognized by him as thoroughly scientific in their attainments. Such physicians saw the storm as it was approaching and by judicious care and treatment often averted it.

Intimately connected with the question of the early treatment of insanity is prophylaxis, for in no disease is the old adage more emphatically true that "an ounce of prevention is worth a pound of cure." This prophylaxis should begin in infancy, indeed it should go back and embrace the care of the health of the body and mind of the pregnant and parturient woman. The child's infancy should be guarded with care, especially in the matter of proper food, abundant clothing and pure air. The gastric and nervous disturbances of this period of life should be promptly and judiciously treated. These neurotic children should be managed with firmness as well as kind-

ness, and taught from the beginning obedience and self control. If precocious, as many of these children are, they must be restrained in their school work. If slow to learn, the utmost patience must be exercised, and no undue pushing permitted. These children are often in great danger in public schools, on account of the want of individualizing of instruction here and will successfully pass this critical time much more certainly under the care of a judicious tutor. The use of tea, coffee, alcoholics and the various narcotic preparations must not be permitted. The associations, habits, and reading of the child must be so guarded as to prevent the premature development of the sexual system. The child's bodily condition should be developed to the utmost extent possible by physical culture, gymnastics, cycling, rowing, swimming and every other means that will assist in this important work should be employed. Wise culture and judicious discipline will often avert the consequences of the bad inheritance of these children. The males should be advised to marry early, but the females only after their fullest developement, in order that they may successfully withstand the dangers of pregnancy and the puerperium. Both sexes should be impressed with the necessity of moderation in all things.

If these prophylactic measures fail and the insanity develops then careful study must be made of its causation, always bearing in mind that fact, that in every case there must have been an expenditure of nervous energy much beyond the capacity of the individual. So that every case of insanity is a neurasthenia. Among the pathogenic factors we can often recognize anæmia, lithemia, oxaluria, malaria or some other toxemia, and its successful treatment will often restore normal mental activity.

I propose to limit this paper to those things which it is wise for the family physician to do at the home of the patient, while considering the question of ultimate care and treatment, with the hope that the prompt and judicious use of them may, sometimes at least, bring the case to a successful termination without removal to the insane hospital. I am quite sure too little effort is made at home treatment; that patients are often hurried away without adequate efforts at restoration, and moreover some of the cases that cannot be treated at home will do much better in an ordinary general hospital than in one specially devoted to the treatment of the insane. The first essential in this treatment is *isolation*, that is the separation of the patient from the other members of the family. For this purpose, of

course, a competent nurse is necessary and a young nurse is better than an old one. The nurse should be bright, cheery and full of resources, always sincere and honest in conversation and in action. No attempt at deception for any purpose should be permitted. In the important matter of delusions, the nurse should ignore them if possible, but never accept them as truth through motives of expediency.

The second essential is *rest* in bed as nearly absolute in the beginning of the case as possible, in a room with the largest possible amount of sunshine, well heated and ventilated with all the comforts it is possible for the patient to possess and appreciate.

The first indication for treatment is the relief of insomnia. In this the tendency is often to overdose the patient with powerful narcotics in order to secure quiet, overlooking the fact that such dosing will seriously interfere with the restoration of the wasted nerve energy by checking the digestion and assimilation of food. They require eight hours of sleep out of the twenty-four, but this should be obtained by the very mildest means that can be found to accomplish the purpose. Drugs are not always necessary in mild cases, a hot foot bath at bed time with a cold compress to the head, the administration of hot drinks, beer, or other fermented liquors, general massage, cerebral galvanism or the wet pack are often all that is necessary. The wet pack is useful not only as a means of producing sleep, but it has tonic and sedative properties. I think for its administration patient should lie on a lounge, easy of access on both sides. This lounge should be covered with a rubber blanket and over this a large sheet, wrung out of water of a temperature below that of the body, should be placed. The patient should be put on this sheet, which should be quickly folded over him except his head, he should then be wrapped in several blankets and permitted to remain in this pack at least a half hour. Its first effect will be antipyretic but very soon it becomes a hot vapor bath, the cutaneous vessels are dilated, elimination by the skin increased, the pulse and respiration fall, and its soothing sedative influence on the nervous system is often very manifest. After a half hour has elapsed the patient should be vigorously rubbed and placed in a warm bed.

When these several agents for the relief of sleeplessness fail then we of course must have resort to hypnotics, and of all the long list of these agents I prefer chloralamide in doses of from fifteen to thirty grains. It has a sleep producing pow-

er equal to chloral in many cases and with much less depressing effects on the circulation. It has a more agreeable taste and is much less irritating generally. It produces sleep in favorable cases within an hour, and if it fails within this time the dose should be repeated. If given in milk or beer its presence can rarely be detected by the ordinary patient. When chloralamide fails then the combination of chloral and potassii bromidum, fifteen grains of each in some convenient vehicle, the fluid extract of glycyrrhiza being the one best, may be of service and this may be repeated if necessary in one hour. In some cases of mental disease sulphonal is a desirable hypnotic, often producing sleep of a refreshing character, with very little constitutional disturbance. It should be given, I think, in hot water, the ordinary dose being about twenty grains. It acts very slowly and therefore should be administered two or three hours before the usual bedtime of the patient. Hyoscine hydrobromate is a valuable hypnotic, especially in cases of mania. It has the advantage of being tasteless and in very small bulk and therefore can be easily administered in many vehicles. In one one-hundredth of a grain hypodermatically, it is often very efficient, when it fails by the mouth.

The second important indication for treatment is the improvement of the general nutrition. To accomplish this it is often necessary to improve the condition of the digestive tract. Gastro-intestinal fermentation is the rule in these cases and to correct, laxatives such as cascara sagrada fluid ex.; a combination of aloin, strychnia and belladonna or a mercurial, are of service. Colon flushings using the normal saline solution (3i to a pint) at a temperature of about 103° F. will often very much improve nutrition, and lavage with a solution of soap will sometimes improve the appetite, and often relieve the sitophobia so frequently present in the early cases. The gastro-intestinal derangements still further require the use of antiseptics and it is unfortunate that we have no perfectly reliable intestinal antiseptics. The best are bismuth, beta-naphthol, bismuth subnitrate, bismuth subgallate and thymol. I frequently use a combination of bismuth-beta-naphthol, five grains; thymol, one grain; papaine (Carica) one grain; extract nuxvomica, one-fourth of a grain; three or four times a day.

The *food* must be given in the greatest abundance possible and when the digestive capacity is poor the food should be predigested, and such things as malted milk, pancreatized milk, beef peptonoid and somatose are useful and may be given in large quantities under such circumstances. The cases that re-

fuse food should not be allowed to go more than two days without forcible feeding. This can best be done with the nasal tube and should be done twice a day, using about one quart of a mixed food consisting of milk, eggs, minced beef, orange juice, pulp of grapes, wine, and medicine combined in various proportions to suit the necessities of the patient. Home treatment most frequently fails in insufficient feeding.

In cases of melancholia, with a tendency to suicide, one or more attendants must be on duty night and day. This form of insanity is often most benefitted by the use of aqueous extract of opium or codeine in small doses frequently repeated. These drugs will not only diminish the mental anguish but also lessen the sitophobia.

In cases of mania, motor excitement and destructiveness can sometimes be controlled by the conium fl. ext. (squibbs) in five to ten minum doses every hour and where this fails hyoscine hydrobromate, hypodermically will often succeed.

The wet pack has already been mentioned as useful for the relief of insomnia, in addition to this other hydrotherapeutic measures are of service. In melancholia douches of 80° F. to 90° F. general in application and of short duration are valuable stimulants to nutrition, and in mania a prolonged warm bath with a cold compress to the head tends to diminish excitement.

Electricity especially galvanism by reason of its alterative and tonic properties is generally indicated. It is best used first as cephalic galvanization by placing the anode at the forehead and the cathode at the nucha, using large electrodes with a current strength of three to five milliamperes for about five minutes and second by galvanization of the cervical sympathetic by placing cathode over the cervical sympathetic ganglia and the anode at the nucha and using five to ten milliamperes of current for about five minutes. Static electricity from a machine of high voltage used as insulation for five to ten minutes and then as induced sparks from the spinal region used daily is often very useful.

General *massage* is useful, especially in melancholia, by improving the circulation and by its sedative and tonic effects on the nervous system. The constitutional disturbances of which the most common are anæmia, lithemia, oxaluria and malaria will of course require special treatment.

If under this line of treatment the patient improves and there is encouragement for further home treatment, then the isolation can gradually give place to renewed social relations with other members of the family, and for the rest there

should be substituted by degrees out door exercise and light occupation, and later travel with a suitable companion will hasten and confirm the cure.

To sum up, for the early treatmsnt of insanity at home or in general hospital, the indications are: 1. Isolation. 2. Rest. 3. Somnifacients. 4. Gastro-intestinal antiseptics. 5. Diet. 6. Hydrotherapy. 7. Electrotherapy. 8. Massotherapy. 9, Special treatment of abnormal constitutional states.

SELECTION.

COMMON MISTAKES OF DOCTORS.

To promise a patient that you will cure him.

To promise to call at an exact specified time.

To promise that the malady will not return.

To promise that you can render more efficient service than your fellow-practitioner.

To promise that your pills are not bitter or the knife will not hurt.

To promise that the chill or fever will not rise so high to-morrow.

To allow your patient to dictate methods of treatment or remedies.

To allow yourself to be agitated by the criticisms or praises of the patient's friends.

To allow yourself to buoy up the patient when the case is hopeless.

To allow yourself to make a display of your instruments.

To allow yourself to experiment or exhibit your skill un-called for.

To allow yourself by look or action in a consultation to show that you are displeased, and that if you had been called first matters would have been different.

To allow yourself to indulge in intoxicating beverages.

To allow yourself to rely wholly upon the subjective spmptoms for your diagnosis... *Ohio Medical Journal*.

ANTI-TOXINE.

BY A. C. COTTON, A. M., M. D.

Serum Therapy has come to stay. Whether we accept or reject as facts any or all of its loudly proclaimed triumphs we must be impressed with this one truth, that in the search for therapeutic agents in animal tissue and secretions we are getting down closer to nature in her own laboratory. Each year adds hundreds to the earnest throng of observers straining to detect and interpret some detail movement in the "battle royal" between the forces, physiological and pathological, who watch with eager eyes the marshalling of her resources, prophylactic and compensatory, in nature's irrepressible conflict.

The results predicted from this line of research are so startling in their brilliancy that, small wonder, the entire scientific medical world stands on the *qui vive* to catch the first "Eureka," of some bold bacteriologist. Too often the acclaim swells to such thunderous magnitude that the voice of the promulgator is lost in the tumult before he has fairly started his case and he finds himself the lionized hero of discoveries he has never claimed to have achieved. The short lived furor over the preposterous claims for Tuberculin left Koch in doubt which most to dread, the sneers of his enemies or the applause of his friends.

The theory that the *Vis Medicatrix Naturae* rallied the physio-chemic forces of the animal organism to resist or to repel the invasion of toxins or infections which, if left unchecked, would impair or destroy the organism, is no new theory, as those who listened to Uncle Allen well remember.

The fact that animal organisms which have been invaded and ravaged by certain infections were there after afforded a certain immunity from disastrous effects of future invasions of the same infections has long been well established.

The fact that individuals exposed frequently or for a long time to certain infections develop a tolerance of or acquired an immunity from certain diseases, has long been claimed. This immunity, sometimes termed natural and sometimes acquired, was made a feature in some scholarly papers on Contagious Diseases by Professor Lyman some years ago.

Since the time of Jenner it has been the dream of Medical Science to discover methods of immunizing against infection other than that of variola. After a century of following *ignes fatui*, among the treacherous bogs of empiricism, the later day investigators struck solid foundation along the line of biologic and bacteriologic investigation conjoined with an intense study of chemico-physiology and micro pathology. The amount of work applied in this direction is almost inconceivable and the number of independent investigators very large. Among the workers along these lines I mention only a few names most familiar to you, as Brown Sequard, Pasteur, Koch, Senn, Haines, Welch, Klebs, Loeffler, Klein, Aronson, Martin, Roux, Kitasato and Behring. To the last four named experimentors, more than to others, perhaps, the scientific world to-day grants the mead of praise for having established incontrovertibly by tests innumerable and conclusive the following facts:

1. That the infectious disease, diptheria, which is conveyed from one individual to another by means of the Klebs-Loeffler bacillus, may be invoked in lower animals by inoculation with cultures of the bacillus or the specific toxin of diptheria, which is their metabolic product.

2. That different species of animals show marked differences of susceptibility to their toxin, the guinea pig the horse the lowest susceptibility.

3. That even in the most susceptible, the virulence of the dose of toxine may be so modified as to produce only temporary indisposition, or may be intensified so as to produce death in 36 hours.

4. That a given quantity of given strength of the toxine will produce in different guinea pigs of same weight and condition, the same effect in the same time.

5. That a given dose of toxine (non lethal) reported at intervals in the same animal, as the horse, induces less marked symptoms with each succeeding dose until no symptoms follow the injection and the animal is immuned to the toxine.

6. That the amount and virulence of the poison may be increased but the animal shows with each dose an increased resistance to the action of the toxine.

7. That if the blood of this animal under experiment be tested it is found to have developed a power for neutralizing the virulence of the toxine outside of the body, so that when administered to other animals, highly susceptible (guinea-pigs) it fails to produce its characteristic effect. And this neutraliz

ing effect is in exact proportion to the quantity of toxine that has been administered during the immunizing process. The serum of blood drawn from this immunized animal constitutes our diphtheria *anti-toxine* and its potency depends upon the amount of toxine administered to the animal.

The tests for potency are accurate and absolute. This potency is expressed in anti-toxine units. It is put up in bottles and stamped, 600.units, 1000.units, 1500.units, 2000. units, &c., which means that the entire contents of that bottle possess anti-toxic power indicated on the label.

It is admitted by all that anti-toxine will neutralize diphtheria toxine and cultures of the diphtheria bacillus, so that either may be injected with impunity into the tissues of a susceptible animal. It is known exactly how many anti-toxine units are necessary to neutralize a given quantity of the poison provided they are mixed before injecting. It is also known how much anti-toxine is necessary to neutralize the same amount of toxine when they are not mixed but injected simultaneous on opposite sides of the same animal, and *very much more* anti-toxine is *required*.

What we do not know is how much anti-toxine exactly is necessary to neutralize a given quantity of toxine at somewhat lengthened periods precedent. What we do not know and what we most particularly desire to know, inasmuch as it is about the only phase of the entire subject that has any practical bearing upon the needs of our profession as life savers, is what number of anti-toxine units is necessary to neutralize an indefinite amount of diphtheria toxine of unknown virulence that has invaded at a prior indefinite time and is presumably hourly continuing to invade in unknown strength and quantity from a patch of recurrent and extending culture of Klebs-Loeffler bacillus on an unknown extent of mucous surface of a human being of unknown susceptibility.

Here the bacteriologist leaves us, as oftentimes he has done before, among the dogs and horses and guinea-pigs to grope our way with our new remedy into the habitations of suffering humanity, to pick up here and there by empiricism, as of old, the data necessary to test the practical value of the new diphtheria cure.

But perhaps the bacteriologist, to whom so much is due, will not desert us on the very threshold of this new realm of therapeutics. Indeed he is already endeavoring to secure for our advance some definite facts in regard to the length of time

a prophylactic injection of the anti-toxine may secure immunity from subsequent diptheritic infection.

Unfortunately, perhaps, if I may be allowed to indulge the thought, law and humanity do not give him the license to freedom of experimentation among human beings that he has enjoyed in his zoological laboratory. Still the horse has been made to contribute, without detriment, most valuably in this line of research and it is to be hoped that no more severe measures as applied to experimental investigation with human beings may enable our experimentors to establish some definite laws, so much needed to give practical value and precision to our new therapy.

The immense importance of the subject of a reliable remedy for this terrible disease is evidenced by the almost instantaneous clamour from all parts of the known world for some of the new remedy. So great indeed, was the demand that all the bacteriological laboratories, private and municipal, were inadequate to supply it. Cities, states and governments at once made generous appropriations for immediate preparation for the anti-toxine, and every hospital where diptheria was treated and the large proportion of enterprising private practitioners began at once to record their results of its administration. Nothing like this degree of enthusiasm has ever been known in connection with any therapeutic measure. The results of this is seen in discussions and clinical reports crowding the columns of our professional literature, which, also, during the past year has literally teemed with statistics comparing the mortality of diptheria under the new and old treatment. I may say that almost without exception, the reports are highly favorable to anti-toxine as compared with any other known treatment for diptheria. This is especially true in regard to the mortality from the disease, which from a rough estimate of the statistics at my command seem to indicate a reduction, under the use of this agent of about 50 per cent. The inflexibility of figures for veracity, however, is more an adage than a reality and to appreciate the real relative benefits of the new treatment so many factors influencing the statistic making must be taken into consideration, that the mere statements of relative percentages of former and present mortality alone may not be accepted as a component of the value of the new treatment.

The advent of the new remedy almost simultaneously with the popularization of the bacteriological diagnosis of the disease may be claimed as favoring the statistics for the new

treatment, as under careful clinicians, no doubtful cases are allowed to enter their reports, whereas, we have every reason to believe, that under former methods of purely clinical diagnosis many cases were reported which had no claim to diphtheritic infection. On the other hand it seems reasonable that the unusual activity and interest every where manifested by those of the profession, who are equipped for the treatment of a large number of diphtheria patients and the confidence inspired among the laity for the new remedy through professional and newspaper laudation have developed in the public an unusual desire to have their stricken ones under the care of institutions equipped with the anti-toxine. Under this same stimulus hospitals and wards have opened for the treatment of diphtheria and are well patronized in communities where heretofore, the term "infectious disease hospital" was enough to strike terror to the heart of the average layman. This has led to earlier accurate diagnosis and scientific care of the large number of patients afflicted with acute angina, who under the old regime, would have suffered from delayed inaccurate diagnosis and possible indifferent treatment.

This I saw well illustrated in Boston after the opening of their much advertised and almost perfect new city hospital for the treatment of infectious diseases. It was my good fortune to study the details of treatment therein adopted by that very able veteran, Dr. J. H. McCullum, in whom the entire population of Boston, both professional and lay, have learned for many years to repose absolute confidence. Patients came there with sore throats for diagnosis and treatment who, under other circumstances, could hardly have been forced into the wards of an infectious disease hospital. It was *the popular thing*.

Compare this with the former class of patients sent to the city infectious disease hospital, or as it is sometimes called, the "pest house," only in advanced malignant forms of the disease or because they could secure no medical attendance at their homes. These factors, I believe, operate favorably to the statistics for the new treatment, in as much as they secure the earlier diagnosis and attention which we have always recognized as of the highest importance in the successful management of this dread scourge.

Since commencing the use of anti-toxine the mortality of cases under my immediate observation has compared favorably with the majority of reliable records I have seen: viz:

Private practice, 9.2 per cent.

Consultation practice, 37.4 per cent.

Hospital, 13.8 per cent.

The manner of death in fatal cases is no different from what I have observed before the days of anti-toxine except, perhaps, in diminished asphyxiation from laryngeal occlusion. Post mortems have, when obtained, shown the same characteristic changes in nerve and muscle with fatty degeneration of the heart.

Anuria and albuminurea were not more frequent. The limb and joint pains mentioned by some observers of this treatment have appeared but seldom, but the so called urticarial rashes have appeared in about 10 per cent. The count of blood corpuscles has yielded no positive uniform results although carried out in but a limited number of cases. No abscesses or tumors have developed at seat of puncture.

The post-diphtheritic paralyses were certainly not more marked nor frequent than formerly. The swelling of the glands of the neck decidedly less and when much swollen upon admission, as in two instances they were enormously distended, the swelling subsided in a manner quite remarkable. A positive decline in temperature as a rule followed the injection, quite closely, in pyrexia. The short rise in temperature, noted by some, after the injection was not observed. Dr. Tice, the very able resident physician in charge of the infectious wards at the County Hospital has kindly furnished me copies of temperature charts, illustrating the fall of temperature following the administration of anti-toxine, which however, I cannot publish for want of space.

The most noticeable effect from the administration of anti-toxine was observed upon the membranes, limiting their extension and causing early liquifaction and extrudation. This was especially observable in naso-pharyngeal and laryngeal cases, some of the latter recovering without operation from a grave condition of dyspnoea beyond all precedent in my experience. But one fatal case has occurred under my observation in which the anti-toxine was administered within the first twenty-four hours. My practice is to give anti-toxine in every positively suspicious case of angina and rest with that, unless urgent symptoms occur, until a culture is obtained showing the Klebs-Loeffler bacillus. In that case, if the membranous symptoms persist or the temperature remains high, a second injection is administered. The size of dose being seldom less than 10 c. cm. of 1000 anti-toxine units potency. This is repeated at intervals varying from 6 to 24 hours (dependent upon

the urgency of the symptoms) until marked amelioration occurs. After the disappearance of the membrane, cultures are made once a day until three successive negative results are obtained. Even then, however, the case will bear watching as colonies appear sometime a week or more after the disappearance of the membrane. Each injection should be given only after the surface of the skin about the seat of puncture is rendered surgically aseptic and the syringe and needle sterilized by boiling or soaking in carbolic acid, 95 per cent. The charge is injected very slowly into the subcutaneous areas and the spot dressed surgically (collodion cotton.)

In the light of copious published evidence of the success of the anti-toxine treatment, it seems to me that no physician can look his constituency in the face who is not prepared to give every case of diphtheria intrusted to his care the benefit of that treatment. If disinclined to carry out the details of the treatment himself, or to call in a consultant, he may telephone the City Health Department and secure the services of competent physicians who are employed by the city to do this work for him free of charge. Chicago has now 60 or 70 anti-toxine stations, located at drug stores in various parts of the city where fresh supplies of the anti-toxine may be obtained at about cost price or gratuitous if the patient be poor. The health department will also make cultures without charge of suspected cases.

I would advise every physician to go constantly prepared for diagnosis and treatment of diphtheria. A trifling expense will add to the contents of his grip-sack all that is necessary, viz: a bottle of reliable anti-toxine of 1000 units, two test tubes of culture media, either of prepared serum or glycerine-agar or one of each, properly sterilized, well stoppered with singed cotton and further protected by thin rubber caps over the cotton to keep dry. These may be protected from breakage by enclosing in wood. A fine platinum wire with loop terminal is convenient for collecting secretions but an ordinary surgeon's probe answers the purpose and must be properly sterilized by passing through the flame before using. Get a good anti-toxine syringe with fittings that will stand boiling, having a capacity of not less than 10c. cm. For the benefit of any reader who desires to equip himself with a complete out-fit, simple but efficient, I would refer to the best article I have seen on that subject in the November number of the *Dietetic and Hygienic Gazette*, by George H. Weaver, M. D.

In conclusion, don't expect too much from the use of anti-

toxine. It will neither cure or relieve scarletina, measles, broncho-pneumonia, nephritis, membranous angina, follicular tonsillitis, anaemia, paralysis, tissue degeneration, or heart failure.

It will not cure diphtheria.

It will kill the poison that causes diphtheria if the quantity of anti-toxine be proportionate to the toxine.

A CASE OF ANEURYSM OF THE ARCH OF THE AORTA.

(Reported from notes by D. L. Humfreville and F. C. Honnold.)

The following case of aneurysm of the aorta has been deemed of sufficient interest to the readers of THE CORPUSCLE to merit a somewhat complete report because it illustrates in an unusually clear-cut manner many of the clinical and anatomic features and consequence of aneurysm in this locality.

We are indebted to Dr. Ryan, late resident physician to Cook County Hospital for the following clinical history.

Albert B, white, married, age 42, laborer. Admitted to the Cook County Hospital Oct. 24th, 1895.

Eleven months ago, patient began to cough. This was accompanied by pain in both sides of the chest. Since that time he has had more or less pain in the right side of the chest (front and upper portion), and in the back, between the scapulae.

Coughs a little and cough is of a harsh, brassy nature. Expectoration scanty and tenacious in character. Suffers from attacks of dyspnoea. Has had these attacks at intervals during the past five years. Attacks now occur more frequently and are more severe in character than when they began.

Personal History:—Has lived in Chicago 15 years; laborer; drinks both beer and whiskey moderately; uses tobacco; denies venereal history in detail and syphilis in particular.

Family History:—Father died of phthisis; history otherwise negative.

Previous Illness: Measles; rheumatism, slight attacks for many years; lung trouble 11 months ago, does not know the nature of it.

Physical Examination: Fairly well developed. No emaciation. Rational. Skin cool and moist. Pulse regular, soft and increased in rate, Respirations not increased in number, but patient suffers from marked dyspnoea. Respirations noisy. Patient assumes semi-sitting posture.

Scalp and calvaria, negative. Eyes, clear, somewhat prominent, conjunctivæ injected. Pupils equal and react to light and accomodation. Ears negative. Mouth and tonsils negative. Tongue heavily coated and moist. Laryngoscopic examination negative.

Chest: Barrel shaped, retracted above and below clavicles. Sterno-cleido mastoid muscles very prominent. Chest wall very prominent in infra-mammary region. Respiratory movements limited. Chest is at all times fully expanded and forced respiration is impossible. Expiration much longer than inspiration.

Percussion shows chest to be hyper-resonant all over, except over an area beginning at the junction of the middle with the internal third of the clavicle, on either side, and downward to the articulation of the manubrium with the gladiolus. Vocal fremitus somewhat increased over apices. Dry rales and ronchi can be heard all over chest. Auscultation unsatisfactory on account of the noisy respiratory sounds.

Heart: Area of cardiac dullness very much diminished. Heart sounds regular and strong. No murmurs present. Second pulmonary sound accentuated. Pulsations in arteries of both sides of body equal in force and synchronous. No murmur, impulse, thrill or bruit can be detected anywhere. (None were detected at any time, even after respirations became relatively easy.) No tugging at trachea.

Abdomen: Retracted. Liver dullness in right mammillary line begins at 7th rib. Flatness begins at 8th rib and extends to costal arch. Spleen not palpable.

Urine: Color, amber; reaction, alkaline; Sp. Gr., 1018; no albumen or sugar; microscopical examination negative; phosphates increased.

Limbs negative. Patellar reflexes somewhat increased. Inguinal and cervical glands enlarged.

Patient's temperature was normal except a slight rise due to an acute attack of bronchitis. Pulse varied from 120 on entrance to the hospital to 80 or 90 after rest in bed for several days

Treatment: Rest in bed. Limited diet. Potassium iodide, one gram three times a day, and a cough mixture of syr. ipecac, spts. ammonia aromat., tr. opii. deodarata and syr. squills.

Patient's condition improved and he became quite comfortable and he was in his usual good condition on the day of his death, November 25th, 1895. On some slight exertion, he fell back and died almost instantly.

AUTOPSY.

(Made before the class by Dr. Hektoen, Nov. 27th, 1895, 24 hours post mortem.)

Inspection: Somewhat emaciated body of a man, about 45. Rigor mortis marked. Moderate posterior lividity. Hair brownish, rather scanty; pupils equal; neck rather thin; thorax barrel-shaped; abdomen not distended. There are no distinct scars about the genitalia.

Internal Examination: Peritoneal cavity empty; peritoneum smooth; stomach distended with semi-solid contents; sigmoid flexure displaced towards the right and slightly adherent to the posterior surface of the mesentery of small intestines.

Pleural cavities empty; pleuræ smooth, except for a few adhesions of the left apex. *Pericardium* nearly empty, surfaces glistening. The *heart* is of normal size, the external surface smooth, the endocardium not thickened, the cavities empty; the heart's flesh of good consistence, coronaries normal. The *aorta* is much thickened in spots at its beginning and at the commencement of the arch of the aorta and running to the middle of the thoracic portion, is a fusiform dilatation, with a saccular bulging at the junction of the arch and the descending aorta extending to the left and backward. The cavity is filled with loosely laminated blood clots. The distinct sac thus formed is as large as a fist and is quite closely adherent to the left aspect of the upper part of the cervical portion of the spinal column, the bodies of the 2nd, 3rd and fourth vertebrae presenting quite marked evidence of erosion from pressure atrophy.

Removing the thoracic organs and the trachea, larynx and tongue *in toto*, it is found that the *Esophagus* presents at about the middle a large, ragged opening communicating directly with the cavity of the aneurysm, and that the stomach is filled with softly clotted blood.

The *tongue*, *pharynx*, *larynx* and *trachea* are normal. The *thyroid* is of usual size. The *peribronchial glands* are black on the cut surface and somewhat enlarged. The *lungs* show the margins but slightly pigmented; they weigh, together, 1000 gms; at the apex of the left lung are a few shreds of torn adhesions, but there are no caseous or tubercular foci below the adhesions; the lower lobes of the lung are more congested than the upper, but show no distinctly solid areas; the vesicles at the margins are much distended and translucent. The right lung is not quite as much congested as the left, and a little more spongy.

The *spleen* weighs 150 gms; the capsule is thickened in areas; the cut surface is normal.

The *kidneys* weigh 350 gms, together; the capsules are easily removed, and the surfaces are left smooth, the cortical margins are distinct, and the cortex is of normal thickness. Both organs contain but little blood.

The *pelvis, ureters, bladder, prostate gland* and seminal vesicles are normal. The *adrenals* are normal.

The *liver*: Weighs 1725 gms; the surface is smooth and normal to the naked eye; the organ is quite bloodless. The gall bladder contains a quantity of small, black, crumbling, granular masses; its mucous membrane is smooth.

The *stomach* is found filled with semi-solid substance; on opening, this is found to be about two litres or more of fluid and clotted blood.. The mucous membrane is covered with some viscid mucous stained with blood.

The *intestines* are a little pinkish on the mucous surface in the upper part, but otherwise normal throughout their entire extent.

The *abdominal aorta* shows nodular, whitish, raised areas down to the bifurcation; in places there are calcareous plates; on the cut surface some of the nodules in the intima are found to contain a granular debris.

The *brain* and *spinal cord* were not examined.

Anatomic Diagnosis: Nodular arterio sclerosis of aorta.

Fusiform dilatation and sacculated aneurysm of the arch of the aorta.

Rupture into the esophagus, and hemorrhage into the stomach, general anemia.

Pulmonary emphysema.

Adhesive pleuritis.

Anthraco-sis of peri-bronchial lymph glands.

Pigment granules in gall bladder.

A CASE FROM THE MEDICAL CLINIC.

BY NORMAN BRIDGE, M. D.,

PROFESSOR OF CLINICAL MEDICINE, RUSH MEDICAL COLLEGE, CHICAGO.

CASE I.—*Convalescent typhoid fever.* This patient has now been suffering from a typical attack of typhoid fever for the past three weeks. He is now convalescent, yet not out of his bed, and certainly not out of professional oversight and care. For the past few days his temperature has been but a little above normal, ranging not higher than 101° , while today it is quite at the normal point. There is still some mental dullness, and the characteristic eruptions upon the surface of the abdomen may still be noted, though not as pronounced as a few days ago. In this case these “typhoid spots” have been particularly prominent and interesting, and I should judge that altogether there has been at least one hundred of them. These spots disappeared on pressure; were bright pink at first; and one “crop” would slowly fade away to give place to another. Typhoid spots thus come and go, but the life of one eruptive point, or of one series of points, is much shorter than the course of the disease. This eruption upon the abdomen in typhoid fever we cannot explain; we do not know the reason of its appearance. It is not particularly associated with the gravity of the case, or the age and physical condition of the patient. It has been thought to have some connection with the ulcerative process of the bowels, developing anew coincidentally with a new involvement of patches in the intestines. This we do not know with certainty. We do know, however, that convalescence is indicated by these spots, i. e. their gradual disappearance, and non-recurrence, indicates to us the subsidence of the typhoid.

There is another feature in connection with ordinary typhoid I would like to call your attention to. It is shown in this case, being brought out by the reply he has just made, viz. “I feel strong and hearty, as if I could get up. The dull feeling is passing away. I have had some pain, mainly in the pit of the stomach. My appetite is now good.” What I wish to especially have you bear in mind from this statement is the comparatively slight amount of pain he has had; the slight amount of bodily suffering at any time. The reason for this is

not that there is no pain present, but that the mental dullness which comes to almost all typhoid patients makes them incapable of appreciating the discomforting sensations of their sickness. They lie in a state of indifference, the sensory nervous system being blunted to the disease processes going on. Patients frequently confess to this dull pain sensation and mental indifference after recovering from an attack. I have had patients say their course of typhoid was the most peaceful period of their lives, i. e. they were unannoyed at events, cared for nothing, and really did not suffer either in body or mind.

Now in the way of attention there is but little to do for this patient, except to provide a suitable diet, and watch his progress. I am convinced that many cases of so-called relapse are due to errors in this regard.

THE HONOR SYSTEM FOR THE SELF-GOVERNMENT OF STUDENTS.

BY PROF. E. FLETCHER INGALS.

The introduction of the Honor System for the self-government of students in Princeton appears to have been attended by the most satisfactory results, both to the class and the faculty, and I am informed that similar results have attended its trial in the University of Minnesota. When we consider that medical students average two or three years older than the students of a literary college, it seems reasonable to expect that a similar system would be even more advantageous in medical schools. Formerly when the terms were short and the students were held together but two winters they did not become acquainted and it is doubtful whether any system of the kind could have been maintained, but at present the men become well acquainted and there is a strong fraternal feeling which gives them an active interest in each other. Students who will so soon have to take their places in the community as men should certainly be able to govern themselves. A class of seven hundred and fifty men, like that in Rush, represents all the electors of a town of three thousand inhabitants. Imagine for a moment what a condition such a town would be in without laws or authority. There appears no good reason why these seven hundred and fifty men could not legislate for themselves for small yet important things of their college life quite as well as a similar number could legislate for the inhabitants of a large country town, in matters of public policy, good order and repressing of misdemeanors and crimes.

Every one of these students in a short time will have to take up the responsibilities of life, and hence he cannot commence too early to cultivate the principles and habits that he hopes will distinguish him as a gentleman and a reputable citizen when he goes out to practice his profession. Under the Honor System it seems to me that it would be well for each class to elect two of its members to a judicial council, to which should be referred all matters of deportment or ethics, and by which should be decided what penalties were necessary, to enforce the college rules, and such other rules as might be enacted by the whole class. The officers of various classes might constitute a senate, the duties of which should be to enact class laws and aid this judicial council in their investigations. The college rules as expressed by the wishes of the faculty, and such other rules as might be enacted by the senate would constitute the laws that would be enforced by the judicial council. Under such a system every member of the class should be considered a committee to report to the judicial council any misdemeanors or ungentlemanly conduct, and any irregularity observed by the faculty should be reported to the same body. The judicial council acting upon these reports could ascertain whether the complaints were well founded or whether they were mistakes, and in case of the former would decide upon the penalty which the transgressor should suffer; aid being sought from the faculty only if it ever became impossible for the judicial council to enforce its decrees. In this way it appears to me that all serious offenses, such as cheating in recitations or examinations, infraction of college rules and all acts incompatible with gentlemanly conduct may be dealt with by the class judiciously, harmoniously and effectively. In a body of men such as that constituting the class in Rush College, about ninety-five per cent. desire to be gentlemen; there are some who forget that they have passed the period of childhood. There are a very few, ranking far below the big boys, who are a constant menace to the comfort and best interests of the class—persons who are only a little better than the absolutely viscious beings that usually insinuate themselves into the student body. It is the duty of the faculty to protect the interests of the best element. In the performance of their duty they are responsible to the Old Alumni, to the fathers and mothers of the present students, to the students themselves, and also to the profession at large and to the community. This responsibility they cannot evade, but if some method can be devised whereby the students themselves may assume a part of this re-

sponsibility, it would be eminently desirable for all concerned. The sentiment of good fellowship and fictitious honor which now induces even good students to conceal misdemeanors would then impel them to report irregularities at once to their judicial council, where prompt action would be taken to suppress such conduct by bringing the offenders to justice. I should be very glad if the best element of the class would undertake this measure, as I believe it would be greatly to their own interests, and promote harmony and lasting friendship between them and the faculty; but if it is found impracticable for the students to do this, the obligations resting upon the faculty to preserve order and decorum in the interests of those students who are here to fit themselves thoroughly for the great profession of medicine, must be met, and I can assure the great body of the class that no effort will be spared to accomplish this end.- I am satisfied that the students as a body can not fail to realize that the faculty, in the curriculum prescribed, in the hard work required, in the honesty demanded in recitations and examinations and in the gentlemanly conduct and good order insisted upon is working for their interests. While there are necessarily some boys in the class that are inclined to make disturbance, and there are a few who cannot see in which direction their interests lie, yet the faculty in every effort for better government or for promotion of gentlemanly conduct among the students is always sure of the moral support of the great majority of the class, of their preceptors, of the Alumni and of the community.

BUSINESS MANAGER'S LAMENT.

Tell us not in mournful numbers,
Life is but an empty dream,
When to pay the printer monthly
All the winter we must scheme.

DR. SENN AND HIS NEW WORK ON THE PATHOLOGY AND SURGICAL TREATMENT OF TUMORS.

[We take pleasure in presenting the following which appeared editorially in the November number of the Indiana Medical Journal. Eds.]

Senn has written a great work of seven hundred pages on Tumors, in which the personal pronoun does not occur either in the body or preface. The preface is dated at Chicago, September, 1895; the book is from the press of W. B. Saunders, of Philadelphia; it is sold by subscription at six dollars, and is in every way a perfect modern sample of the art preservative of all arts.

The dedication is to the memory of Samuel David Gross, whom the author affectionally characterizes as "A MASTER IN SURGERY; A PIONEER IN PATHOLOGICAL ANATOMY; A SURGEON HONORED AND REVERED WHEREVER HIPPOCRATIC MEDICINE IS TAUGHT OR PRACTICED; A MAN WHOSE EMINENT PROFESSIONAL REPUTATION WAS CROWNED BY THE PURITY OF HIS PRIVATE CHARACTER."

This great work by our American Billroth comes to the profession at an opportune time, and will be eagerly read by every teacher of either medical or surgical pathology.

Dr. Senn is in a large sense a native product, a Western autochthon, though his birth fell in Switzerland, and his fame may be justly claimed by both continents. His parents located in Fond du Lac, Wisconsin, where the embryo pathologist attended school, and later added to his gains the wisdom and discipline of a country school teacher. In 1868 he graduated from the Chicago Medical College, and served the usual course in the medical and surgical wards of the Cook County Hospital, making so notable and independent a record as interne that anecdotes and traditions of him were treasured and are handed down even to the present time. Dr. Senn then married, and and hid himself for several years in a forest town of Wisconsin, where every hour not employed in earning the "damned guinea" of Hunterian legend was devoted to experimental physiology and pathology. He evidently possessed the elements of genius which Galton defines as hereditary ability, capacity and willingness to work, combined with long life, for the greatest acquisitions of art, literature and science have been accomplished in the later half of life, as instanced in such

modern examples as Darwin, Spencer, Tennyson, Gladstone and Bismarck.

It is a matter of congratulation that Dr. Senn is still only in the noon of life, and it is to be hoped for the further glory of Western medicine that he will not acquire in Chicago the pace that kills.

After Senn emerged from the wilderness he located in Milwaukee where his practice centered for a time, and where he grew rapidly into fame, wealth and power. Quite recently he has made his home in Chicago, holding the chair of surgery in Rush Medical College, and is now universally recognized in that proud city as its most eminent representative of "Hippocratic medicine." Those conversant with Dr. Senn's course as a consultant, have the utmost respect for his pathological integrity, as well as for his power of diagnosis. This is based upon all the knowledges that go to make possible this consummate flower of medicine—an unerring diagnostician. He has the enviable reputation of never advising an operation opposed to sound pathological judgment. This is worthy of mention for it has frequently been darkly hinted that eminent operators in Chicago have become tainted with commercialism, or what is equally as bad, the desire to increase their case lists at all hazards, even to their patient's detriment and to the dishonor of the profession of medicine.

He has also become a patron of the Chicago profession by donating the Baum medical library, enriched by his own modern collections, to the Newberry Library of Chicago, where it is kept under the name of the Senn Collection. The collector of the Baum Library, Dr. Wm. Baum, Professor of Surgery in the University of Gottingen, died in 1886, desiring this library should go to the German Congress of Surgeons, of which he was one of the founders. Dr. Senn bought the library containing a full set of Virchow's Archives and other serial publications which the Chicago Library continues to add to the collection. The complete collection, valued at over \$50,000 is now in a fire-proof building and accessible to the entire medical profession.

But enough of Dr. Senn's personality, and now a few words about his book on tumors. There is no more attractive as there is no more difficult subject in pathology than the definition, and classifications of tumors. The knowledge and diagnostic power of the clinician can be tested in no severer way than by his conclusions as to an occult tumor in his patient; its pathology and causation; its clinical aspects of benignity or

malignancy; its diagnosis and treatment. With the introduction of the cellular theory and the bacteriological pathology there has come a revolution and overthrow of the old notions and classifications. As the author says in his preparatory note, the energies and attention of surgeons and pathologists have been directed to bacteriology and surgical technique to the detriment of the study of the origin, nature, structure, clinical aspects and treatment of tumors. To atone for the deficiencies of those medical men who graduated before the methods of laboratory investigation, experimental research and clinical observations, which have revolutionized the etiology and pathology of inflammatory diseases in the last decade, Dr. Senn has traced, as far as our present knowledge will permit, every tumor to its proper anatomical starting point and histological source, and made sharp histological and clinical distinctions between true tumors, inflammatory swellings and retention cysts.

To this end the author divides his work as follows: Origin and Nature of Tumors; Anatomy and Biology of Tumors; Pathology of Tumors; Clinical Aspects of Benign and Malignant Tumors, Transformation of Benign Tumors and Post-Natal Embryonic Tissue into Malignant Tumors; Diagnosis of Tumors; Prognosis of Tumors; Treatment; Classification; Papilloma and Onychoma; Adenoma; Cystoma; Carcinoma; (170 pages). Fibroma; Lipoma; Chondroma; Osteoma; Adenoma; Angioma; Lymphangioma; Lymphoma; Myoma; Neuroma; Sarcoma; (75 pages). Teratoma, (42 pages). Retention Cysts (45 pages).

The text of these various chapters is illustrated by 515 engravings, including several colored plates; of the cuts over 100 are original.

Dr. Senn adds this work on Tumors to his previous books, "Experimental Surgery," "Intestine Surgery," "Tuberculosis of the Bones and Joints" and "Surgical Bacteriology." Of the latter work a new edition was put forth by the publishers, Lea Brothers & Co., in 1892.

A noticeable feature of Senn's work on tumors is the absence in it of the American authors. This is explained by the fact that pathology and bacteriology are products of the old world, notably French and German. His first paragraph states that the great work initiated by Pasteur, Lister and Koch has inaugurated a new era in the study and treatment of disease and must serve as a permanent foundation for all future investigations. And in the same opening paragraph he states

that "while much has been done to establish the microbic origin of malignant tumors no positive results have been attained and but little additional light has been shed on the etiology and pathology of tumors since the epoch making views of Virchow and Cohnheim."

The American names quoted by Senn are usually in connection with treatment or operative technique—rarely if ever on the essentials of pathology.

For example of his Chicago associates, past and present, we read in the section on the Medical Treatment of Tumors that iron preparations were regarded with favor by Daniel Brainard; conium maculatum is extensively prescribed even at the present day by N. S. Davis, of Chicago, and that men like Andrews, of Chicago, and Eichhorst, of Zurich, extolled the merits of condurango, introduced by Bliss, of Washington, but like all other famous cancer remedies condurango soon fell into well-deserved "innocuous desuetude."

In the clear-cut summaries of subjects Dr. Senn invariably uses italics for emphasis, thus: *No kind of internal medication has any influence whatever in limiting tumor-growth, much less in causing the disappearance of a tumor* (page 114).

The same with injections of erysipelas toxins in sterilized cultures made from Fehleisen's streptococcus of erysipelas. Dr. Senn followed the method of Coley and Ball in twelve cases of carcinoma (page 118) with no benefit; he also treated six cases of inoperable sarcoma with the combined sterilized cultures of the erysipelas streptococcus and micrococcus prodigiosus without appreciable effect (page 55c). The author advises, however, that this method of treatment should be encouraged and persistently carried out. Dr. Senn is not at all hopeless of the ultimate cause of carcinoma being discovered and proper therapeutic measures established on such an etiology. "A great many honest investigators are at work and the prophesied results will be realized in time."

There have been of late expressions of doubt upon the part of several notable operators within the range of the writer's knowledge, who have not received a sufficient practical training in histology and histo-pathology to readily make, stain, and interpret their sections. They have expressed lack of faith in the conclusions of microscopists as to the malignancy of certain tumors or suspected tumors. They are inclined to stand by the clinical history and ignore the microscope. Dr. Senn devotes four pages (103-7) to the value of the microscope

in the diagnosis of tumors, and his conclusions are fair and just to both the clinician and the microscopist. He says:

The greatest blunders in diagnosis and treatment have been made through placing too great reliance on the microscopic examinations of *fragments* of tumor-tissue obtained either before operation or from the specimens removed. The late Emperor Frederick of Germany is a case corroborating the truth of this assertion. His attending surgeon, Von Bergmann, made a correct diagnosis, basing his opinion upon the clinical aspects of the case. A part of the tumor was removed and examined by the most distinguished pathologist the world has ever seen. His diagnosis was based upon what he could see under the microscope. The epithelial cells greatly increased in number, retained their normal relation to the underlying tissues. All the pictures under the microscope represented a benign papiloma. The disease, however, pursued its relentless course, notwithstanding the favorable prognosis made, and in a few months destroyed the life of the illustrious patient.

The part removed and examined represented only one part of the tumor. The attached deeper portion contained the carcinoma cells, and it was from this part that the disease extended. The case shows the importance of examining different parts of a tumor if the microscope is to be relied upon in making a final diagnosis.

Preparations of teased tissue are condemned by Dr. Senn as they should be. Very important, too, is the statement that the microscope can not be relied upon in differentiating between a small round-celled sarcoma and some of the granulomata; particularly true is this in making a differential diagnosis between syphilitic gumma and round-celled sarcoma (p. 585). * * * * *

The chapters on Teratoma and Retention Cysts, which close the treatise, are replete with interest. Free use is made in the latter of the researches of Bland Sutton, of London.

We recommend this book without reservation to our students, and particularly to the general practitioner of medicine, who has indeed a much greater need for it than the operative surgeon. It will assist the rank and file in the early diagnosis of tumors, and if widely read and studied by practicing physicians, it will be of more use to the public, whose servant the doctor is, than any other recent work in medicine and surgery.

A. W. B.

ROMANCE AND RESEARCH

HER name was Mabel M——. I met her one cold, sunny afternoon in early November under circumstances which had the effect of making our future relations in regard to one another most amicable. My first impression of her might be summed up as follows: A pale, spiritless, unattractive little woman, with eyes of a color you wouldn't remember after leaving her presence, and in fact it would have been difficult to determine even while looking at them; well formed ears and large white teeth; soft brown hair, not long, but thick, and a nose with a slightly Roman inclination, placed between high cheek bones. - So much for physical description, and for a general remark I might add that I thought she was, without doubt, the quietest, most unobtrusive little body I had ever seen. If she had a father, mother or any relatives living, we could never ascertain their identity or whereabouts through her.

From the time of our meeting till Christmas our paths were thrown together a great deal, so that we gradually formed an acquaintanceship, which as it progressed discovered to me many charms about her which would be unnoticed by the casual observer. As I said, she was pale and fragile when I first met her, and as time wore on did not seem to improve in bodily condition, on the contrary constantly lost weight, and came to be the object of a good deal of interested professional attention from myself and a couple of medical friends to whom I had introduced her. We often discussed her condition in private, as nearly as we could diagnose it and did things for her unbeknown to herself, all of which however seemed of no avail in her behalf and our theories were continually being overthrown.

She was friendless and alone and had it not been for our intervention would probably much earlier have filled a grave. Her eyes had a faraway expression, and an air of mystery seemed to shroud her. We all made conjectures as to her early life and past history, but any attempt to gain information on the subject from her met with flat failure, for she *could not* be drawn out.

We thought from her emaciated appearance—as I said before she was pale and fragile—that her malady must be of a tubercular nature; but she never coughed and had no respiratory troubles whatever. Ordinarily a person on being shown

so much attention, would occasionally show some signs of either pleasure or pique, but she always appeared totally indifferent and listless. A great many men would have become impatient at such behavior on the part of one by whom they were doing their best, but we were young and arduous in our grand profession, and never showed, if we felt, any irascibility.

In this way things went on, she gradually becoming more pitifully thin and wasted, till finally the fellows working on the "lower," suggested to us engaged on the "upper," that after we finish our dissection tomorrow, we all take a night off and go to the theater.

Thus ended the "Romance and Research," and "Old Tom" carted off the *debris*.



If I should die tonight—

And you should come to my cold corpse and say,
Weeping and heart-sick, o'er my lifeless clay,

If I should die to-night—

And you should come in deep grief and woe,
And say, "here's that \$10 that I owe,"

I might arise in my great white cravat,

And say, "What's that?"

If I should die to-night—

And you should come to my corpse and kneel,
Clasping my bier to show the grief you feel;

I say, if I should die to-night,

And you should come to me, and there and then

Just even *hint* about paying me that ten,

I might arise awhile—but I'd drop dead again.

—*Gross Medical College Bulletin.*

SKETCHES OF THE LIFE AND WORKS OF AURELIUS GALEN.

Mythology has been defined as the "dust of all Ancient Religions." Whether the meaning meant to be conveyed was the dross, the dregs, that which was left, or whether it was the gold dust that contains the value, the dross having been consumed, we may not know. At all events the halo with which mythology clothes the ancient philosophers and sages is far from the dust that covers from sight or dims brightness.

The Gods may govern and control and the fates decree, but the mind and the heart work results. Sir Walter Scott found it hard work to fashion a protestant fairy, so we will find it difficult to produce a modern myth, but the present age reverses past ages and modern science enjoys to-day rich harvests from the sowing of good seed in fertile ancient mythological soil.

In science as in religion there is still a march after the "black book with the silver seal" that is a sure guide to success, happiness, length of days and much wisdom.

Few sought or found from medical science more that could be handed down the ages or bless and enlighten than Aurelius Galen, the bright star in the galaxy of second century philosophers, writers and physicians. He was born in Pergamum in Mysia 130 or 131 A. D. He received a careful early education from his father Nicon who was himself an eminent mathematician, architect and astronomer. Galen's father was also remarkable for his excellence of natural disposition and mental culture, while on the other hand his mother appears to be a second Zanthippe. His father, when the son was about seven teen years old, was admonished by a dream to devote his son to the study of medicine, but it was fully two years before he allowed him to enter upon his studies. The name of his instructor at that time has been concealed, but for what reason is unknown to history.

Galen was educated in the schools of the Stoics Academies. Peripatetics and the Epicureans.

When about twenty years of age he left Pergamum and went to Smyrna in order to place himself under Pelops for instruction in Anatomy. He was also desirous of studying with the celebrated peripatetic philosopher, Albinus. After com-

pleting his desired course of study in Smyrna he visited many other cities. The last was Alexandria, from which city he returned to his home in Pergamum in 158. He was now in his twenty-eighth year. Six years later he went to Rome, and while there healed the celebrated peripatetic philosopher Endomes, and other persons of distinction, Erelong, by his learning and unparalleled success as physician he earned for himself the titles of Paradoxologus the "wonder speaker" and Paradoxopœns, the "wonder worker." By his popularity he incurred the jealousy of his fellow practitioners and he left Rome in 168 and repaired to his native city, where he remained until called to Venetia by the Emperors Lucius Verus, and Marcus Aurelius. In 170 he returned to Rome with Marcus Aurelius, who, on departing from that city to conduct the war on the Danube, appointed him medical guardian of his son Commodus. It was with much difficulty that he was persuaded to dispense with his personal attendance. Galen remained several years in Rome, greatly extending his reputation as physician, writing some of his most important treatises and eventually returning to Pergamus after spending some time at the Island of Lemnos. While at this island he learned the method of preparing the popular medicine called "terra semnia or sigillata." Whether he ever returned to Rome is uncertain also the time and place of his death. According to Suidas he died at the age of seventy in the year 200, during the reign of Septimus Severus. If however we are to trust the testimony of Abul-faraj, one of his Arabian biographers, he died in Sicily in his eightieth year.

Galen was one of the most versatile writers of his age. He is said to have composed five hundred treatises on various subjects including logic, ethics, and grammar. Of the published works attributed to him, eighty-three are recognized as genuine, nineteen are of doubtful authenticity, forty-five are confusedly spurious, nineteen are fragments and fifteen are notes on the writings of Hippocrates.

Galen having been so carefully trained in his youth, especially in the stoic philosophy, was an unusually prolific writer on logic. He wrote many commentories and original treatises, but only one has come down to us of the whole catalogue, his treatises, "fallacies in dictione." In his medical and scientific writings he discusses many points of logical theories. His name is perhaps the best known in the history of logic in connection with the fourth syllogistic figure, the first distinct statement of which was ascribed to him by Averroes, There is

no evidence from Galen's own works that he did make this addition to the doctrines of syllogism. The remarkable passage quoted by M. Minas from a Greek Commentator on the analytics, referring the fourth figure to Galen, clearly shows that the addition did not, as generally supposed, rest, on a new principle, but was merely an amplification or alteration of the indirect moods of the first figure already noted by Theophrastus and the earlier peripatetics.

Of all the Authors of antiquity none possess so just a claim to the title of anatomist as Claudius Galenus. Though in mythology Galen appears to less advantage in osteology than in anatomy he, nevertheless, carries that part of anatomical knowledge to greater perfection than any of his predecessors. His angiological knowledge, though vitiated by the erroneous physiology of the times, shows his diligence in dissection. In neurology we find him to be the author of the dogma that "the brain is the origin of the nerves of sensation, and the spinal cord those of motion." Galen was noted for his precise descriptions of the bones, muscles, nerves, and other organs, and for his use of the methods of experiment and vivisection.

The Galenic system is directly opposed to the chemical; the remedies consisting of preparations of herbs and roots by infusion and decoction. Dr. Holmes gives a few remedies which are both Galenic and chemical, that is, both vegetable and mineral.

Galen lived during the reigns of Hadrian, the Antonines, Commodus, and Severus. After returning the last time to Pergamus, to practice, a lovely tribute of respect and confidence was paid to Galen. Testimony of the unequivocal and universal belief in his theories, and trust in his practical skill was shown him by his fellow citizens, when they trusted him with the treatment of the wounded Gladiators. In this capacity he is said to have treated wounds successfully which were fatal under former treatments. Although there comes down to us no definite place or date of the death of Galen a record of his successful life stands on the pages of history, a monument to his skill, his industry and usefulness, upon and around which has gathered the gold dust of the centuries.

Alumni Department

JOHN MILTON DODSON, A. M., M. D., EDITOR.

MEMBERSHIP IN THE ALUMNI ASSOCIATION OF RUSH MEDICAL COLLEGE is obtainable at any time by graduates of the College, providing they are in good standing in the profession, and shall pay the annual dues, \$1.00. This fee includes a subscription to THE CORPUSCLE for the current year. This journal is the official organ of the Association.

Dues and all communications relating to the Association should be sent to
JOHN EDWIN RHODES, M.D., Sec'y and Treas., 34 Washington St., Chicago

'94—Dr. E. Windmüller is in practice at Woodstock, Ill.,

'95—B. A. Arnold and his brother, well remembered by the members of the last graduating class, are practicing at Freeport, Ill. Having succeeded an old practitioner at that place, they report unusually good business for the first year.

'95—A. C. Norton, M. D., has removed and permanently located at Rockwell City, Iowa.

'95—The following members of the class of 1895 have found congenial locations as indicated: Dr. H. M. Replogle, Centerville, Iowa; Dr. P. S. Kaadt, Bryant, Iowa; Dr. D. M. Layton, Metropoliton, Mich.,

'95—Dr. R. C. Robe has removed from Ada, Ohio to Pueblo, Colo., where he may be found at the corner of South Union Ave. & C. St.

'95—Dr. C. L. Montgomery, writes from Bushnell, Ill., where he has entered into partnership with Dr. R. A. Pinkley, as follows: "I am located on the best corner of this city and doing quite well. We have a fine country around and our city is quite a railroad center. With kindest regards for yourself and Rush in general I am yours very truly."

"I assure you no one feels a deeper interest in 'old Rush' than I do."

DR. W. J. BRADLEY, Coal City, Ill.,

J. M. DODSON M. D., care Rush Medical College. *Dear Doctor:*—Enclosed please find report of case which I thought might be interesting to THE CORPUSCLE readers. Hoping you are enjoying good health etc. I remain very truly yours.

H. J. GAHAGAN '93.

A PECULIAR CASE OF ALCOHOLIC INSANITY.

On Sept. 12th. I. B. N. was admitted to this institution

with the following history. Leaving home a few days ago in good physical health and mentally sound he began drinking rather heavily and did not return that evening. The next day he passed by his house several times as if in doubt as to whether he was at the right place. His wife watching his movements came out and spoke to him, but without recognition on his part, but accompanied her into the house. On being interrogated by her he seemed unable to comprehend and would not answer, being moved to tears quite frequently. As there was no improvement in his condition the next day she was advised to have him sent to the Detention Hospital from whence he came here. On admission patient acted similarly as just described, refusing to answer questions and was quite emotional, very tremulous and kept muttering to himself. On being assigned to a ward, patient became quite inactive and took no notice of surroundings. All attempt at questioning proving futile either verbally or in writing, although during the day he wrote a request for some tobacco. He ate and slept well and enjoyed good physical health. On the morning of the 16th. about four o'clock, three days after admission, patient suddenly recovered power of speech and memory, asked the night watch as to his whereabouts. On my morning rounds he spoke to me, said he did not remember anything which had occurred since he had left home one week ago, everything was an entire blank.

He is a very intelligent person and has followed the vocation of a life insurance agent. His brother removed him during the day, since which time he has been perfectly sound. He has had no previous attack and no history of heredity.

H. J. GAHAGAN, '93

Asst. Physician, Ill., Northern Hospital for Insane.

AN UNUSUAL CASE.

EDITOR CORPUSCLE:—When I was a resident of Logansport, Ind., I treated an old lady, who lived in an old house on "Flat Iron Square," and was supported by the church of which she was a member.

All I did for her was without knowing her circumstances. After a time she concluded she was too much of a burden for the church and she would go to the county asylum.

She sold her household goods and then found a relative of mine and gave him a fee for what I had done for her, because she would not need it where she was going.

I consider that a very unusual case.

I. B. WASHBURN, M. D., Rush, 1861.

'49—"Wishing good luck to "Old Rnsh" and its alumni, I am." etc. CHAS. C. GARRETT, M. D., Calvert, Tex.

'54—Dr. C. A. Bucher has recently removed from Batavia, Ill., to Fitzgeards, Irwin Co., Georgia.

'68—"I see by the CORPUSCLE you desire the address of Dr. W. F. Coleman. He died several years ago at Decorah, Iowa, where he had been in practice nearly all of his professional life. I settled in the same county, Ossian, in 1868, immediately after my graduation, and remained there until 1880, when I came to Kansas City. Dr. Coleman did an extensive practice, especially in consultation with country doctors around Decorah. He was a great friend to young doctors struggling to get a practice." N. A. DRAKE, M. D.,

1001, Harrison Street, Kansas City, Mo.

'76—Dr. G. C. Stockland, who graduated from Rush Medical college in 1879, after spending several years of study in Europe, has located at Mason City, Iowa.

'72—"Long life to Rush Medical College, the CORPUSCLE and the alumni of 'Old Rush,' the best medical school west of the Alleghany Mountains." F. ANTIS CANFIELD, M.D
Necedah, Wis.

'77—"Always count on me as a faithful member of the class of '77. We, in the far west, feel proud of 'old Rush," as her boys stand at the head. J. D. BAIRD, M. D.
Walsenburg, Colorado.

The following chapter of reminiscences from one of the older alumni, Dr. N. A. Drake, class of 1868, of Kansas City, will be full of interest for both the older and younger graduates of Rush. It is to be regretted that we cannot have more of just such letters as this from some of the many alumni of Rush. Dr. John Edwin Rhodes, the Secretary of the Alumni Association, has recently been appointed by the faculty, the historian of Rush Medical College. He is endeavoring to collect everything in the way of letters, pamphlets, books, programs, etc., which are in anyway associated with the college. Such letters as the one below are not only of great interest to present readers, but are of great value to the historian of the college and will be of surpassing interest to future generations as reflecting more accurately than anything else the inner life and thought of the students of by-gone days. Thanks to you, Dr. Drake, for this letter. We trust it may be the precursor of many others to follow from other alumni of "old Rush:"

REMINISCES OF OLD RUSH. By an Alumnus of the class of 1867-8.—‘Prof. Moses Gunn, of the University of Michigan, was called to the vacant chair of surgery, made vacant by the untimely death of Prof. Daniel Brainerd in the autumn of 1866-7. I, with about 25 others followed him to Rush.

The session of 1867-8 was the 25th annual one. Our class was the first out of the new building on the north side, which was destroyed by the great fire. There were about 400 matriculants, 117 regular graduates, 11 honorary and *adeundem*. The names of the professors on my diploma are as follows and in the order named—Profs. Blaney, Freer, Allen, Miller, Rea, Ingals and Gunn.

I can recall a number of amusing incidents in connection with our final examination. Some, however, not so amusing but remembered. I was a member of Prof. Rea’s private quiz class on anatomy and surgery and it was a quiz I can tell you. C. T. Parkes was really our best in anatomy, yet there were several others who stood at the front with him. Among them was Dr. Amos Babcock of New Hampton, Ia. Prof. Rea examined the members of his quiz class in anatomy by themselves at the final examination. When Babcock’s name was called he was asked to describe the teeth. ‘The teeth?’ he says, ‘Yes, the teeth.’ Bab dropped his head, mused awhile, tried to say something, finally blurted out, ‘I don’t know anything about the teeth, I did not learn that.’

The most of us feared Dr. Freer on physiology. Our class was divided into sections for the final examination. Prof. Freer commenced at the foot alphabetically, thus bringing my name toward the last. I was very diligent in asking the boys after each section had gone through the *grind*, how Prof. Freer took them. I very soon learned that ‘the liver and the portal circulation’ was his hobby. My section was called one evening to meet the next morning at 8 o’clock in the green room.

I did not sleep much that night. I am sure I knew more about ‘the liver and the portal circulation’ that morning than I do now. I was the third on the seat, No. 1 and 2 were asked some ordinary questions which were promptly answered. As my turn came the Professor looked over his glasses and said, ‘Mr. Drake tell me what you know about the liver and the portal circulation.’

He got it! After several minutes he raised his hand and asked me the office of the bile duct. I told him and started on again. He stopped me, complimented me for my thoroughness and said ‘that will do; you can go,’ and I went!

Prof. Miller mixed me up on the start as he delighted in doing. The duration of pregnancy I got 376 days. He passed along and did not smile till he dismissed me, then said I had better look up the duration ere I was subpoenaed as a witness in court to testify as to its duration. I have been on the witness stand in a case where the duration of pregnancy was the question in the case—I knocked off a hundred days from that examination, however.

Prof. Blaney called my name as I entered the room. He gave me a long searching look, then said: 'Your face does not look very familiar, guess you have not attended my lectures regularly.' I answered truthfully I had not. He asked me where I had attended lectures before. I answered the University of Michigan, where I devoted the greater part of my time to chemistry and laboratory work. There were several present and he had quite a number of papers on the table of reactions which had been written out by others. He asked me to look them over and correct them. I sat down and went to work! After going through all the papers given me—all on reactions—I reported to him that *not one* of the reactions of all the dozen was correct. He looked through the papers and said I was right and requested me to write them out properly. After which he dismissed me.

Profs. Gunn and Allen gave us mostly a written examination. I well remember them, especially Prof. Gunn's, with whom I was more familiar, as I had listened to his last course at Ann Arbor and his first at Rush. His first question was, 'What is pus?' I don't suppose there is a student, especially a graduate who ever attended his lectures who does not remember his theories of pus: 'Dead bastema,' 'Dead formative material,' 'Natures dressing for a wound.' These expressions are Gunn's and only Gunn's. In originality and pleasing address, his own peculiar reasoning, reasoning to drive home truths in which he had very few superiors, if any, in this country, are remembered while others are forgotten. He died too soon, but his mantle fell on one C. T. Parkes—who was in every way capable of continuing his great work, having been closely associated with him for years. For a short time only, when death snatches him (Prof. Parkes) from the midst of his work when his career had hardly begun. Yet young as he was, he had few superiors. Had he lived to his three-score and ten what might he *not* have been?

Prof. Allen's first question was 'Describe the pulse.' I did not and could not, neither can I now.

Prof. Ingals confined his questions almost exclusively to doses of medicine. I think my examination as a whole was much above the average.

We were examined by the seven regular professors named. There were several lecturers—Profs. Holmes, Rose, Powell and others. How different now! Only for the names in this paper you would not recognize Old Rush of *then* and *now*.

Oh! the strides our old Alma Mater has taken since then and is now still contemplating greater advances. Rush today has no superior and few equals in the land. Is this saying too much? I am sure 'tis not! Long live, and God bless Old Rush is the sentiment of one of the class of 1867-8.

N. A. DRAKE, 1001 Harrison St., Kansas City, Mo.

Derby Line, Vt., Nov. 1st 1895.—Dear Old Rush name ever dear to me. It was my good fortune to be present in the old college halls at lectures and clinics during the last rush of April last. Once more I walked those old familiar halls, and heard again the medics loud and clamorous calls. Of all that Æsculapian throng I saw not one of 1886 among.

But all I felt were brothers,
 Brothers of the high profession.
 Who were falling into line
 Of the sick relief procession.
 But where were the boys of '86
 The old Rush boys of '86.
 They were scattered far o'er hill and dale
 But some had crossed the river Styx.

As I sat in that upper lecture room those last days of April and listened to lectures and clinics and the loud applause of enthused medics, my heart was dwelling upon the past days of old Rush, dear to my own memory. I was looking for those noble faces I did not see, and listening for the voices I did not hear with the outward eye and ear, teachers of that faithful band who have passed on into the realms of higher life. I looked up and beheld the busts of Knox, and Gunn, and one yet to be unveiled. What a change in so few short years. Allen, Gunn, Byford, Ross, Parkes, Knox, gone. Not dead, that which we call death is not death, "but a transition." Leaving the temporal material for the immortal, eternal and spiritual. These men not only live in ever increasing life and usefulness above, but they still live in every good deed which they did while in its flesh and in the light, life, and advancement of Rush Medical College throughout all coming

time. May we trust that their mantle of goodness and wisdom may fall over us all.

Dear Old Professor Lyman and Holmes are still with us in the body, may God bless them and crown them with peace, and the grateful hearts of the thousands who have listened to their teachings. I did not intend to spin out so long an epistle when I started. Pardon me. Sincerely and Fraternally Yours,

H. HERBERT BOGEN. M. D.

We desire to again call the attention of the Alumni to the fact that each one should have one of the Alumni pins of the college. We have been much surprised of late to find that a great number of the graduates do not even know that there is such a thing as a graduate pin, and it is not infrequently the case that we receive word from some friend suggesting the adoption of one. To all such we would say that there is and has been for the past ten years an official college pin, that is in itself a work of art, and in the possession of which any one might feel proud. Those desiring pins should address the CORPUSCLE, 877 Jackson Boulevard, enclosing class year. Price \$3.00

LOCATIONS.

Druggist at Bellevue, Iowa, is anxious to have a good physician locate in that city—one that could speak a little German. Population of the town is 1500, and for a man well qualified thinks the opportunity a good one. For particulars regarding the place, call on or address Porter B. Fitzgerald, with Morrison, Plumber & Co., 206 Randolph St., Chicago.

I can rent hours in my office to physicians, at reasonable price. H. C. Will, M. D., 138 E. Chicago Avenue, Chicago.

J. A. Shreck, M. D., Cameron, Ill., is anxious to secure the services of a well posted, reliable and honorable young physician to take charge of his practice for six weeks or two months, during his absence. Will pay right man \$60.00 per month and 25 per cent. of what he makes and collects, and furnish office, fuel, drugs and rig. Must be communicated with at once.

"Have medical springs in Kendall Co., Ill., that has great curative properties for kidney troubles and rheumatism. Do you know of any physician of means that would like to build and establish a large Sanitarium.

JOHN H. LOUCKS, 323 Coulter Blk, Aurora, Ill.

"We are sadly in need of a good doctor. say a man about thirty years old, a married man would perhaps be preferable: or a single man whose social abilities are good and is a student in his profession. Shall be pleased to give all particulars to any one coming out to look over the field."

JAMES D. SIPP; Riverside, Ill.



THAT HATCHET.

H

E had told us how fractures occurred
and were fixed,

And, noting our density, seemed to be
vexed;

At all events said he'd attempt here to
show

How the human skull suffered receiving a blow.

So he asked for a hatchet to cave in the head,
When forthwith to hand a light hammer was laid,
Which he seemed to resent, with a look of contempt,
And straightway the game was delayed.

Then up sprang our hero, for fear he would catch it,
And when he returned, "he sure had a hatchet."

A single light blow with the instrument brought,
Would beggar the tales of the feats Sampson wrought.

But it answered the purpose;
And accomplished the deed;
Was just the right thing,
We all are agreed.

So here's our best wishes for future success,
Of him who won victory by sheer nimbleness,
And when other occasions demand virtues more rare.
We're certain that "Clarence" will also be there.



COLLEGE NOTES.

We are extremely sorry to announce the continued illness of Dr. Arthur T. Holbrook, '95, one of the internes at the Presbyterian Hospital. The Doctor has been confined to his bed for the past ten days with a mild attack of Typhoid fever, and has received the most careful attention of the hospital physicians, who assure us that his early recovery is expected. Dr. Holbrook has the sympathy and best wishes of a large circle of friends, who will be pleased to learn of his improvement

The Melba concert, given at the Auditorium December 2nd, for the benefit of the Presbyterian Hospital was a decided success both artistically and financially. The program presented was exceedingly satisfactory, and every number was thoroughly appreciated and enthusiastically received by the large audience in attendance. The gross receipts amounted to about \$11,000., from which the Hospital will realize about \$7,000.]

As a result of the recent examination held for the selection of prosecutors under the chair of Anatomy, Dr. Bevan announces the following gentlemen as the successful candidates: F. S. Crocker, N. P. Mills, W. G. Hatch and C. E. Judd: who will succeed Messrs. W. H. Hunter, F. G. Connell, J. A. Harvey and C. E. Hemingway, of the present senior class. The gentleman retiring have proven themselves to be at all times efficient and earnest workers and we trust the newly chosen incumbents may show a like zeal.

The new schedule, just issued, is of especial interest to seniors. Dr. Bridge's Tuesday morning lecture hour will hereafter be occupied by Prof. Cotton who will give his regular series of lectures on Pediatrics: while the clinic hours formerly occupied by Dr. Bridge will now be filled by Prof. Lyman who on Monday mornings will be assisted in the conduct of the clinic by Drs. Herrick and Robinson, and on Thursday by Dr. Moyer. The association of talent in this manner assures a most interesting presentation and discussion of cases, and will no doubt be found a highly satisfactory innovation,

Dr. Bridge left for his home in Los Angeles, Cal., on the

30th inst., having completed his course of lectures in the college for the year. His clinics during his stay have been among the most interesting in the college. His final examination for seniors was held on the morning of the 30th. and the questions asked were characteristic of the man, being decidedly practical.

Prof. Senn's lectures on emergency surgery are unusually interesting this year and are keenly appreciated by the class, most of whom will be sorry when the series is completed.

The first section in the dissecting room this year (Sophomores), have discovered an unusual number of anomalies, among which are several Meckel's diverticulæ, of various sizes and degrees of interest, and the usual number of exceptional divisions and distribution of nerves and vessels. The most unusual and interesting find however is a fistula of the diaphragm with hernia of the liver into the thoracic cavity, fully half of the organ being found firmly attached above the ordinary level of the diaphragm. The extreme rarity of such a condition prompts us to promise an illustrated description of the relations and findings in the case, which will be presented in our next number, by which time the dissection will have been completed.

ANTISEPTIC SURGERY.

"Antiseptic surgery," exclaimed the classic, rapturously, why its mysterious rites remind me of the libations and purifications of some ancient temple. See the high priest and his attendant alcolytes garbed in impermeable cassocks, and surplices dripping with the sacred lotion, ministering to the suppliant at *Æsculapius'* shrine, while another in Sibylline tones cries, 'Procul O, procul este profani,' to all the unclean who would enter the charmed circle.' See *Æsculapius'* handmaids, dreamy-eyed *Anæsthesia* who casts her drowsy spell upon the suppliant, *Asepsis* and her sister *Antisepsis*, who drive far off each vagrant germ, while *Electra* stand ready to explore the inmost recesses of his frame, and the haunts of the dread *Oxyuris*." Here the classic stopped for breath, and the reading man seizing his opportunity, declared he must be going, and went home to look up the subject of *Monomania*

BOOK REVIEWS.

PATHOLOGY AND SURGICAL TREATMENT OF TUMORS. By NICHOLAS SENN, M. D., Ph. D., LL. D., Professor of Practice of Surgery and Clinical Surgery, Rush Medical College; Professor of Surgery, Chicago Polyclinic; Attending Surgeon to Presbyterian Hospital; Surgeon-in-chief, St. Joseph's Hospital, Chicago. 702 pp. Illustrated by 515 engravings, several of which are in colors. Philadelphia; W. B. Saunders; 1895. Price; cloth, \$6.00; half morrocco, \$7.00.

PRACTICE OF MEDICINE. By WILLIAM OSLER, M. D., Professor of Medicine in the Johns Hopkins University and Physician-in-chief to the Johns Hopkins Hospital; formerly professor of the Institutes of Medicine, McGill University, Montreal, and Professor of Clinical Medicine in the University of Pennsylvania. Philadelphia. 1110 pp. Illustrated. New York; D. Appleton & Co., 1895. Price: cloth, \$5.50; sheep, \$6.50; half morocco, \$7.50.

The general text of the revised edition is essentially the same, although in several places an elaboration of subject is noted. One of the prominent and very excellent additions to the new issue is the section of general introduction to diseases of the nervous symstem, in which the author has given in a clear and comprehensive manner the recent results obtained by various investigators regarding the fundamental structure of the nervous system.

As it now stands it is an excellent work, and for student and practitioner alike, merits the highest consideration.

A HAND BOOK OF MEDICAL DIAGNOSIS FOR STUDENTS.

By JAMES B. HERRICK, A.B., M.D., Adjunct Professor of Medicine Rush Medical College; Professor of Medicine Woman's Medical College, Chicago; Attending Physician to Presbyterian and Cook County Hospitals, Chicago. Cloth, 432 pp., with 82 illustrations. Price \$2.50. Philadelphia. Lea Brothers & Co. 1895.

The author in the preface announces that the book is intended for students, and the character of the work shows the correctness of the author's ideas regarding the essentials of diagnosis. The book is not a quiz compend but is a concise, comprehensive and well written treatise, valuable to practitioners as well as students.

The orderly arrangement of subjects and the classification of characteristic and salient signs and symptoms, without de

scending to minutiae, places the book midway between regular text and compends--making it a work *par excellence* for students.

POST-MORTEM TECHNIQUE. BY LUDVIG HEKTOEN, M. D., Pathologist to Cook County Hospital, Director of the Microscopical Laboratories Rush Medical College, Chicago. 166 pp. Forty-one illustrations. Price: Cloth, \$1.75 net. Chicago W. T. Keener Co.

The purpose of the book is well outlined in the preface, which states that it was prepared particularly for the medical students who frequent the demonstrations in pathologic anatomy given by the author at the Cook County Hospital, and that the absence in this country of statutory regulations to guide and direct practitioners in medico-legal cases it was thought might also extend its usefulness.

The work is carefully prepared and being written by one who is thoroughly conversant with such a technique, is necessarily an authority on the subject. It will be found extremely useful to both student and practitioner.

SYNOPSIS OF THE ANATOMY, PHYSIOLOGY AND HISTO-CHEMISTRY OF THE NERVOUS SYSTEM. BY JOHN A. BENSON, M. D., Professor of Physiology in the College of Physicians, Chicago. E. H. Colgrove & Co., Chicago.

The work is a synopsis of the author's lectures on this subject, is carefully arranged, quite complete, and will be found of service to students following his lectures, or interested in the systematic study of the general nervous system.

AMONG OUR EXCHANGES.

(By a rather clever play on words the *Plexus* of the College of Physicians and Surgeons has turned a neat compliment on their President, Wm. E. Quine, M. D.)

ANTISEPTICS.

In antiseptics 'tis now all the rage
To name them after men
Whose names shall embellish history's page,
From Pasteur down to Senn.
Butler says there's Pasteurine,
But he would not prescribe it.
Curtis says there is Senn-ine
And I believe he tried it.
But of antiseptics after all,
The best we yet have seen
Our old standby at every call,
Our own M. D.'s Quine-ine.



HIS FIRST SEIDLITZ POWDER.—The desire for new things was not confined to the Athenians. Even far distant Africa possesses it, if the story now current is true.

On the arrival of the first consignment of seidlitz powders in the capital of Delhi the monarch became deeply interested in the accounts of the refreshing draught. A box was brought to the king in full court, and the interpreter explained to his majesty how it should be used.

Into a goblet he put the twelve blue papers, and, having added water, the king drank it off, This was the alkali, and the royal countenance expressed no signs of satisfaction. It was then explained that in the combination of the two lay the luxury, and the twelve white powders were quickly dissolved and eagerly swallowed by his majesty.

With a wild shriek that will be remembered while Delhi is numbered among the kingdoms, the monarch rose, staggered, exploded, and in his full agonies screamed: "Hold me down!" then, rushing from the throne fell prostrate on the floor. There he lay during the long continued effervescence of the compound, spurting like 10,000 pennyworth of imperial pop, and believing himself in the agonies of death.

Butler University adds the price of the college paper to the tuition of each student.

* *

There are 190 collegiate papers in the United States, while England has none.

* *

Tired Harry—Lady, could yer help a poor fellow a little; I've got a hackin' cough an' a headache? Mrs. Kindlings—Well, I've got a little wood outside you could hack, and it might cure your headache. Tired Harry—Much obliged, mum; but yer see my headache ain't of their splittin' kind.—*Puck*.

* *

TRUE LOVE.—“No,” admitted a man this morning, “my wife never tells me that she is fond of me, but she always makes the kind of pie I like best.”—*Atchison Globe*.

* *

(This is one of President Coulter's favorite stories.)—They were standing under a green apple tree. “George,” she said, “all nature seems to smile on us; even the dear old apple tree is moaning and sighing.” “Yes, Matilda, and if you were as full of green apples as that tree you would sigh and moan too,” replied George.

* *

NOT A UNIQUE CASE.—The curtain had risen on the third act and the momentary hush that preceded the resumption of the performance on the stage was broken by a stentorian voice from the rear of the auditorium: “Is Dr. Higginspiker in the house?” A tall, heavily whiskered man occupying a front seat rose up. “If Dr. Higginspiker is in the house,” resumed the stentorian voice, “he told me I was to come here and call him out at ten o'clock!” Whereupon Dr. Higginspiker, looking very red, picked up his hat and cane and walked down the aisle amid much loud and enthusiastic applause.—*Chicago Tribune*.

* *

Mrs. Fogg—But she is talked about terribly. Mr. Fogg—So is the weather; but it goes right on and is just as fickle as ever. On the whole, the weather appears to have the best of it, and probably is no worse than those who talk about it.—*Boston Transcript*.

READING NOTICE.

In an exhaustive and comprehensive article entitled "SOME POINTS PERTAINING TO THE PRESENT PATHOLOGICAL AND THERAPEUTIC STATUS OF DIPHTHERIA," Dr. I. N. Dove, Professor of Clinical Medicine, Diseases of Children and Hygiene, Marion-Sims Medical College, writes: "Rest is one of the sweetest words in our language, and in the management of no disease is this more true than in diphtheria. In keeping with the experience of Dr. T. E. Murrel, Ex Vice President of the American Medical Association, and Dr. Pollack, of St. Louis, one of the most experienced practitioners of our city, who found antikamnia valuable as a reliver of the pain of nocturnal earache, I have found it of great value as a sleep producer in these cases, given in doses of two and a half to five grains every two to four hours, accompanied by a judicious amount of stimulation, such as wine or toddy. There is no after depression nor have I ever found other than satisfactory results when used." Dr. Eggers of Horton Place, also reports that, in the treatment of an attack of diphtheria he himself suffered, to relieve the pain consequent upon the injection of antitoxine serum, which ordinarily lasts from three to four hours, one full dose of antikamnia subdued it in a few minutes. Clinical reports verify the value of codeine in combination with antikamnia in the treatment of any neuroses of the larynx, coughs, bronchial affections, la grippe and its sequelæ as well as chronic neuroses; the therapeutical value of both being enhanced by combination. The tablets of "Antikamnia and Codeine," containing $4\frac{1}{4}$ grains antikamnia and $\frac{1}{4}$ grain codeine, meet the indications almost universally. As a pain reliver antikamnia either in powder or tablet form acts with safety, certainty and celerity.

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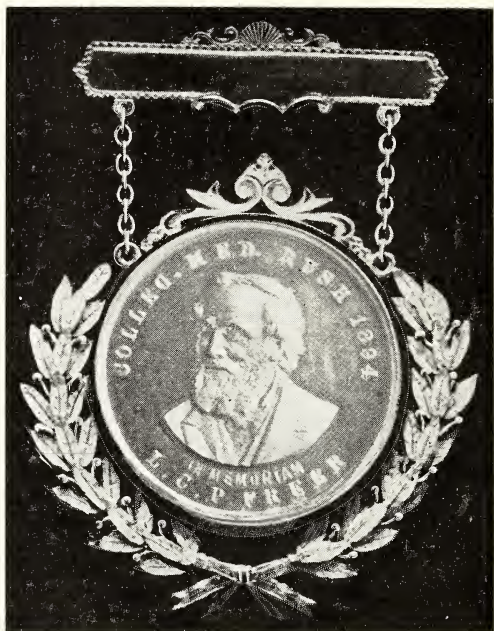
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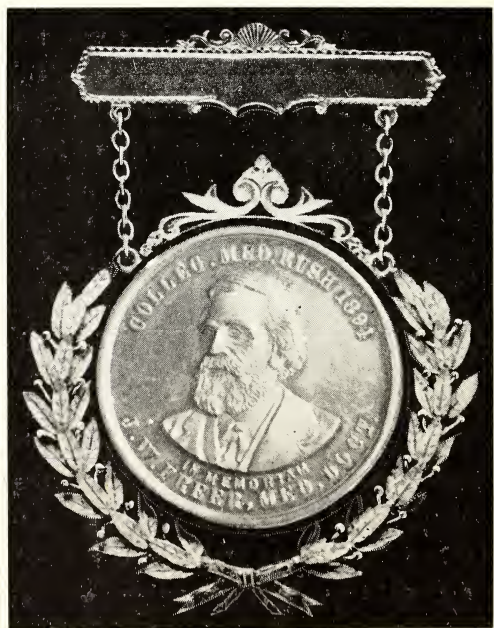
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The Corpuscle.

RUSH MEDICAL COLLEGE, CHICAGO, ILL.
MEDICAL DEPARTMENT LAKE FOREST UNIVERSITY.

VOL. 5.

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NO. 5.

EDITORIAL COMMITTEE.

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Communications relative to advertisements and subscription (Subscription price \$1.00 per annum), should be addressed to the publisher. Remittances should be made by money order draft or registered letter payable to "THE CORPUSCLE," and addressed to Fred C. Honnold, 877 Jackson Boulevard.

RUBY RED AND BLACK: Colors of Lake Forest University. ORANGE: Color of Rush Medical College.

THE NEW YEAR,

"Years following years, steals something every day;

At last they steal us from ourselves away."

At the beginning of each new year, and on the anniversaries of our birth, twice at least in every year, we are forcibly reminded of the flight of time. No one can contemplate the rapid completion of their mortal cycle, as presaged by the recurrence of these events, without a renewed appreciation of their responsibilities; and there naturally follows with those whose ambition is to accomplish the most in life, a review of efforts and results, a thorough knowledge of which constitutes our experience.

Effective action always follows thought, although thought does not always impel action. It is a commendable thing however that we, each of us, recall those instances in which, for any cause we have made a failure and by a study of such cases

fortify ourselves against a repetition of the error, for to repeat a folly is to sin.

The beginning of the new year is known proverbially as a time for making good resolutions, and if there be those who have awaited the arrival of this time in which to correct their course and policy of action, to define their ambition, or to discard a viscious habit, it is to be hoped that the action has been taken, and it is to be regretted that the time for so doing has not come earlier.

We all have much we would forget—

Be that forgotten now!

And placid hope instead shall set

Her seal upon your brow:

* * * * *

Then fold the tent—then on again,

One spot of ashen black

The only sign that there has lain

The traveler's recent track.

SUBJECTS FOR SENIOR THESES.

Since last month's issue, the following subjects have been announced for the senior theses to be offered in competition for the J. W. Freer prizes: *Lipoma*, *Fibroma* and *Adenoma*.

All that has been said in an earlier number to the sophomores in regard to their competition should apply with like force to the seniors in their efforts, and it is the express desire of the faculty that the effort for these prizes shall be general, and not confined to a limited number as on some former occasions.

The subjects are not beyond the ken of any student who will take the pains to systematize his general knowledge on such subjects and elaborate it by a careful collateral reading and study of the particular theme he may choose. And as for the style of the presentation and the vigor of the language used, it must be borne in mind that it is the cultivation of just this talent that is contemplated in the offer of such prizes.

A native literary genius may enable some to write more forcibly than others, but it is generally the case, and in med-

ical literature particularly true, that he who knows his subject the most thoroughly, writes best; and from this it would seem that the student who makes it a point to know most of the subject will generally write the best.

“THE STENTOR’S” QUESTIONABLE POLICY.

It may be a species of charity or a generous instinct that prompts *The Stentor*, the official organ of Lake Forest University, to carry the announcement of two homeopathic medical colleges of Chicago in its columns, but it certainly does seem rather odd to see such a thing done, when the university has a regular medical department of its own, and to which it would seem only natural they should desire such of their graduates as anticipate the study of medicine to attend.

We simply call the attention of the management of the paper to the matter that they may see how it appears to us, and we shall await the developments of the future to ascertain the motive that inspires such a departure.

THE DIRECTORY.

It is a matter of general regret that it was found impossible to issue a directory of the students and faculty this year, but as the enterprise did not seem to enlist the enthusiasm and encouragement of the students in general, it had to be dropped.

It is to be hoped that in succeeding years the matter may be taken up promptly and vigorously, and that every student will take an interest in its success, when its annual publication will be assured.

MEDICAL GYNECOLOGY.

BY JAMES H. ETHERIDGE, M. D.,

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The tendency of to-day is toward specialties in medicine. The specialist is too much inclined to become confined to his branch of study and to ignore the human system as a whole, unless he has been well grounded in general practice of several years' duration.

The most successful specialist is he who is a good general practitioner, from whose practice has grown his special work. The best all-around gynecologist is he who has been and is a good general practitioner. It can be safely laid down as a postulate, that the gynecologist who is incapable of weighing in the balance carefully the necessity for increasing or restraining the organic functions of secretion and excretion with their infinite permutations and combinations incident to disorder and health, is one who will do a great many things that ought not to be done, and will leave undone many things which ought to be done, for the best interests of the patient.

The design of this paper is to enumerate some of the things that can at least interest the gynecologist. How well they will be enumerated remains to be seen. The writer can say, that a careful regard for them added to gynecological treatment has made the practice of gynecology comparatively an easy matter, and that he has seen almost numberless illustrations of failures to treat patients successfully by ignoring the proper use of much needed medicines. No attempt whatever will be made to exhaust this topic. The barest epitome is all that can be expected. It is desired to deal with the symptoms and conditions continually seen in gynecological patients—symptoms and conditions which are perhaps not of gynecological origin; but which are almost inseparable from such patients. The writer is perfectly aware that it is incongruous to present a paper that is not devoted to the consideration of some purely gynecological topic, but he expects to be excused from stepping aside from gynecology somewhat because it is well nigh impossible to draw the therapeutic line

rigidly between this specialty and general medicine in the vast majority of gynecological patients.

The writer has been in doubt as to a suitable title for this paper. By the one used is meant that part of the subject which deals with internal medicine in addition to purely gynecological work.

The most natural order of consideration of topics for medical gynecology is the topographical one, passing from above downward, which begins with the brain and spinal cord. It is perhaps proper to state that very many symptoms herein to be considered are by no means purely and exclusively gynecological; they are the symptoms found very commonly in gynecological patients, very many of them doubtless being reflexes from functional derangements arising possibly from the original gynecological malady. To illustrate, we find time and again frontal cephalalgia to be a reflex from gastric dyspepsia produced by a constipation that results from the physical quietude enforced by an acute metritis. No one will contend that the metritis produces that form of cephalalgia directly, yet without the metritis the intervening links in the pathological chain would not have existed and the headache would not have tormented the patient.

THE NERVOUS SYSTEM.—The commonest symptoms that the gynecologist meets in the nervous systems of his patients, are nervousness, headaches, and backaches. It will be seen that no mention is here made of the many and highly refined neuroses, as no attempt is made to present anything at all of an extensive treatise on the topic. The foregoing symptoms mentioned herein will comprise all that this article desires to include.

Concerning nervousness, it must be said that, if it be regarded as arising from an imperfect capillary circulation in some part of the nervous centers, notably in the spinal cord, and that it is very often associated with deficient excretion from the skin, kidneys, or bowels, and with defective cardiac action, we shall be able to treat the great majority of cases satisfactorily. A sudorific will make many nervous patients less nervous. A diuretic properly selected is often of the greatest advantage. That protean monster, constipation, can derange more lives with nervousness than any other one pathological condition that can be named. Its treatment will be considered later on. The share in producing this symptom attributable to a weak heart is much greater than is generally accorded to it. A weak heart means lessened arterial pressure,

over-distended capillaries and turgid veins, a vascular condition found with astonishing frequency in the brains and cords of nervous women. Therapeutic agents will abundantly confirm this fact. *Strophanthus*, *digitalis*, *strychnine*, and heat all tend to stimulate such hearts. No better remedy can be suggested than the protracted sponging of the spine with water as hot as can be borne, in cases of nervousness associated with insomnia. Heat thus applied reflexly empties the crowded vascular areas in the cerebral and spinal centres and increases the cardiac tonicity for hours at a stretch. Alcohol at bedtime for a few nights can be used to great advantage because it produces an improved circulatory condition, brings needed sleep which in turn strengthens every function, and again rebuilds the strength of the heart-centre in the medulla, thus securing the removal of the cardiac debility.

Cold water, drunk in quantities in the evening, will dissolve and flush out blood impurities, which, producing cerebral irritation by their frictional contact in their passage through the capillaries, thus causing insomnia and nervousness, now find their way out of the body through the kidneys.

In considering headaches, organic cerebral or cranial perversions will not be included, functional headaches only will be taken up. Where we have one cephalalgia dependent on organic cerebral conditions we have hundreds that are functional or reflex, consequently the latter only will fall within the scope of this paper.

It is a wonderful aid to consider the region of the head that aches. Accordingly we find occipital headaches, coronal headaches, temporal headaches, frontal headaches, and general headaches. In the majority of these varieties, will be found that cause and effect are so simply manifested that their investigation and treatment often brings the greatest satisfaction. Many patients have only one variety of cephalalgia, a few have two varieties, and occasionally a patient will be found who has three distinct and separate varieties, each one as easily recognizable as a floating kidney and a prolapsed ovary can be detected in the same patient.

Without going into tedious detail, it will be well to state, somewhat dogmatically, perhaps, the causes of the varieties of headache, knowing that each practitioner's knowledge of therapeutics will furnish the necessary remedy. The enumeration of these causes is suggestive rather than exhaustive.

With occipital headaches we may always question the heart, kidneys, and bowels. A weak heart will permit venous

congestion at the base of the brain, which can produce a persistent sickening pain in that region. A patient, a victim of this form of suffering for years, aggravated at times to an extent beyond endurance so that the nearest physician was often called in to etherize her for relief, once called my attention to her blue finger-nails and blue lips when under the influence of phenacetin given for her suffering. Recognizing the presence of the well-known effect of this drug in producing cardiac depression, digitalis was prescribed with the surprising effect of at once relieving her headache. Ever since then the same drug has been administered in similar attacks always with complete relief. For years she has been told that her retroverted uterus with its deep cervical laceration caused her cephalalgia. Many cases similar to hers have been treated with cardiac tonics with as marked relief.

Renal insufficiency is often accompanied by occipital suffering. This condition will be considered later on. The possibility of its presence necessitates an extended analysis of the urine. When found, it calls for a stimulating diuretic.

Bowel derangement, as costiveness, constipation, loaded colon, chronic diarrhœa, or intestinal dyspepsia, is perhaps the commonest cause of occipital headaches. When found, often dependent on a gynecological disorder, the gynecologist must treat a simple medical case with common remedies, or he will fail to relieve his patient. To suggest remedies for costiveness and constipation to practicing physicians sounds very elementary, but the fact that said physicians are very often defeated in relieving this condition permanently, perhaps warrants a few words hereupon. Where a sufficiency of well-recognized rectal or anal irritation exists to produce an unusual amount of sphincter activity, daily laxatives can be administered fruitlessly for a century. It is surprising to see how almost uniformly a failure to cure a constipation with the patient administration of daily laxatives is associated with such an irritation. It is needless to insist that its removal is a *sine qua non* to the successful treatment by remedies. Cascara sagrada administered daily for six to twelve months will relieve a large percentage of cases of constipation. It is accompanied by fewer drawbacks in its prolonged use than any other remedy that can be mentioned. Patients with plethoric habit are very satisfactorily treated with a morning dose of the salines. One of the most eligible preparations is the granular effervescing Hunyadi salt, followed by a glass of hot water, taken upon arising in the morning. The compound glycyrrhiza

powder and the compound piperine pill are also excellent remedies. Massage and electricity occasionally answer but they are too often inapplicable.

One point to be borne in mind is, that the *prolonged daily use* of a laxative remedy is the *surest to bring desired results*.

The loaded colon exists much oftener than is supposed. One would naturally think that it would be found in constipated people only, and not in those who have daily bowel movements. Observation shows that it exists very often in people who have daily bowel movements, as well as in those who are constipated. A colon that contains feces in large quantities impacted in its loculi, can produce reflex symptoms in the nervous system all the way from nervous irritability up to insanity. Loculi thus embarrassed with impacted feces, for months at a time, can take on a condition of irritability and ultimate reflex possibilities that lead to astonishing diagnosis.

A patient recently came under observation, who had been under gynecological treatment for the past five years. She passed the menopause four years before. She had been treated without relief for uterine malposition, for metritis, for ovaritis, for salpingitis, and for how many other inflammations no one knows. She suffered from more or less constant pain from her right iliac region to the right shoulder. Starting from the pelvis the pain had been regarded as surely gynecological. Examination revealed the fact that the ascending and transverse portions of the colon were greatly impacted with feces. The utmost tenderness was elicited upon bimanual palpation, so that a thorough examination was very difficult. Examination of the pelvis was entirely negative beyond an abundant leucorrhœa. The experienced gynecologist would not have made the mistake of calling this patient a gynecological patient. This case is entirely in the line of the argument in favor of medical gynecology and the thorough examination demanded to determine what is best for patients. Suffice it to say, that the unloading of the colon was immediately followed by the relief from the symptoms complained of. The patient had daily bowel movements, and always had had, and it was difficult to convince her that it was not womb trouble that she had until she saw the enormous quantities of black, ancient and offensive feces, that she had been so carefully carrying around. The abundant leucorrhœa entirely disappeared within a month after unloading the colon. I do not know how to account for its presence, except upon the hypothesis that the uterine and vaginal mucous membranes were attempting, vi-

cariously, to play the part of bowel in active excretory efforts. Detecting a loaded colon is a very easy matter, excepting in very obese patients. With the fingers of one hand placed in the hypochondric region, and the fingers of the other hand pressed deeply in the loins, between the floating ribs and the ilium, one can push the loaded colon forward toward the anterior abdominal wall, where it can be at once detected. Daily bowel movements in such patients can be easily accounted for by the fact that such movements pass down through the accumulation of feces impacted in the loculi. The best means to relieve a loaded bowel are colonic flushings administered with the patient in the genu-pectoral position. The patient placed thus with the shoulders much lower than the nates, can be made to receive anywhere from two to six pints of water. The water should always be as hot as can be borne. If it used tepid or cool, it may cause the most violent tormina. Used hot it almost never produces it. After the colon has been filled the bowels should be thoroughly kneaded until, by pressure, the loculi are distended, when their contents will drop out into the volume of water. As a rule, it is safe to advise daily colonic flushings until no more dark-colored feces come away. I have seen the worst-looking and most offensive discharges pass away on the twelfth or fifteenth day of the daily use of flushing that I have ever encountered. After yellow feces are daily produced the flushings can be given twice a week. After administering them at least a month, strychnine in some form should be given in as large doses as can be borne. The improvement of patients with colonic flushing is immediate. We do not have to wait for a month or even a week to see this improvement. Two symptoms, without abdominal examination, are always suggestive of a possible colonic impaction, and when present they always lead to examination; and they are the presence of cholasmic spots, and the voiding, habitually, of very dark or black feces. No attempt at an explanation of the reason for the appearance of chloasmic spots in such patients is made beyond the suggestion that they may arise from the efforts of the skin to excrete fecal material absorbed by the bowel from its impactions. Why patients with loaded colons should pass black or very dark feces I cannot explain. The clinical fact is all that is offered.

No reference is here made to the extremely common form of occipital headache arising from a lacerated perineum. In such lacerations the veins of the pelvis become distended because of their loss of support in the torn pelvic fascia, thus per-

mitting enormous quantities of venous blood to accumulate in the pelvis. In this way within the pelvis is produced reflexly, through the intricate mechanism of the spinal cord and medulla, the often found occipital headache. I do not speak particularly of this form of headache, for the reason that it is a well-known gynecological symptom.

Chronic diarrhœa is best treated by antiseptic measures, the diarrhœa resulting in most cases from fermentations. Accordingly corrosive sublimate, salol, or salicin will relieve the majority of cases of chronic diarrhœa.

Intestinal indigestion must be met and relieved by remedies before gynecological patients afflicted therewith can be relieved. Fermentation is found at the basis of this disorder, and with this pathological idea in view, the anti-fermentative remedies will suggest themselves.

The next form of headaches to which attention is directed is the coronal variety. There are two kinds of this disorder; those caused by the condition of the stomach and those arising from the condition of the pelvic organs. Accordingly, when we have a distinctively coronal headache, the treatment of the stomach and the pelvis should at once be considered. It will be found that the stomach produces this form of headache a great many more times than the pelvic disorder.

The temporal headache can be produced by almost any organ upon the side of the body where the cephalalgia exists. The throat and nasal canal produce this form of headache; also the teeth and ear, but most frequently the eye. Outside of this we can go occasionally to the organs of the body below the head for the cause.

Frontal headaches arise from stomach, from eye-strain, from coryza, and from gravedo. When we have determined which of these produces the headache, its cure can be easily suggested.

General headaches depend commonly upon general causes. In this way we oftentimes find rheumatic headaches, gouty headaches, neuralgic headaches, and syphilitic headaches.

The rheumatic headache is easily distinguished by exacerbation upon the falling of the barometer.

The gouty headaches are recognized by the accompaniment of uric acid in great quantities.

The neuralgic headache is indicated by the presence of hyperæsthesia.

The distinguishing characteristic of syphilitic headache is its nocturnal visitation. When we have determined the cause

of the general headache, the remedies necessary to cure it will be easily forthcoming. It is well to add in passing that we will oftentimes be astonished at the improvement, under the diathetic treatment, of other symptoms complained of by the patient, which symptoms we had, perhaps, been led to believe were of gynecological origin.

The next symptom offered by the nervous system to which attention is directed is the backache. Nearly all gynecological patients complain of backache, but the merest tyro soon learns that there are backaches and backaches. A great many backaches exist which are not gynecological, and it is very desirable to distinguish them, and treat them successfully. We will be aided greatly in the study of backaches if we take them up regionally. We will thus find that we have the dorsal backache, the lumbar backache, and the sacral backache. It may be said, in a general way, that *all backaches are produced by organs anatomically, not topographically, in front of the seat of the pain*. Bearing this fact in mind enables us to unravel a backache that has resisted all former treatment.

Dorsal backache, in the great majority of cases, has the stomach or liver for its cause. The particular variety of stomach trouble most commonly found as a cause of this form of backache is the fermentative dyspepsia, which invariably produces, sooner or later, dilated stomach. The physical symptoms of dilatation of this organ are well known. In organic diseases of the stomach, as gastric ulcer or malignant disease, the symptoms need scarcely any consideration here. The form of trouble met with in the liver which produces this form of backache is congestion. With the knowledge of these two causes before us, the treatment of dorsal backache becomes, in the majority of instances, a very easy matter. On the same plane with the dorsal region are the pleura, lungs, the insertions of the diaphragm, the spleen, and the pancreas. But it is so seldom that diseases of these organs demand our attention that they will not be considered here.

Lumbar backaches, in the majority of instances, depend upon the bowels and the kidneys. Where a protracted constipation exists, its removal will almost always cure this form of rachialgia. It is only occasionally that it is necessary to consider the kidneys as a cause of lumbar backache. Now and then we will meet with a more or less persistent pain at the juncture of the lumbar and sacral regions, which is uniformly attributable to malposition of the uterus.

The sacral backaches almost always find their cause in the

pelvic organs, and for their relief we will have to consider the uterus, tubes, and ovaries. Oftentimes the rectum will have to be taken into consideration. The persistent gnawing pain at the extreme lower end of the sacrum is usually explained by disorders of the anus. No reference is here made to coccygodynia.

The backaches found in cases of neurasthenia may be considered as a disorder, to a greater or less extent, of the central nervous system. There is a form of backache that is invariably muscular, which depends upon the rheumatic or gouty poison for its cause. Its exacerbations in changes of the weather indicate its origin. Anti-lithic and anti-rheumatic remedies and plasters will relieve it.

THE RESPIRATORY SYSTEM.—The next general division of the human system is the respiratory organs. The first things that attract our attention are the nasal tract and the pharynx. I think that it may be laid down as a general fact that chronic rhinitis and chronic pharyngitis are caused reflexly by imperfect alimentary excretion. I fail yet to find a man or woman, the victim of chronic rhinitis, who has not had in the past intestinal disorder. The fact is mentioned simply for the purpose of calling attention to the possible reflex relations existing between these points. We want no better evidence of this relation than the fact that brisk purgation relieves acute attacks of congestion of the nose and throat. Consequently, it is easy for us to conclude that the patient with gynecological trouble sufficient to demand treatment ought, as a victim of chronic pharyngitis or rhinitis caused by constipation, to receive medical attention before we can hope to cure her.

Passing on further down the respiratory tract, we find that patients suffering from pulmonary troubles, in the way of repeated attacks of bronchitis, pneumonia, or pleurisy, are the subjects of diathetic tendency sufficiently strong to most urgently demand attention medically. Patients inclined to bronchitis challenge our attention to the gouty and rheumatic diathesia.

"Winter coughs," so often seen in gynecological patients are more often relieved by lithium, potassium, and the alkaline diuretics than by any other class of remedies. Renal insufficiency is surprisingly often connected with them.

THE CIRCULATORY SYSTEM.—Passing on to another division of the human system, we come to the circulatory apparatus. It is needless to advert to the fact that the integrity of the human heart is greatly impaired by prolonged lying in bed.

The weakness of a weak heart is of the greatest possible consequence—demanding iron, digitalis, nux vomica, and other tonics for anæmia which we encounter, and which aggravates all the nervous symptoms. Very many times we know that patients, sick enough to receive special treatment, will have many of the alleged reflex symptoms from the pelvic organs relieved by hæmatic remedies. The condition of the cold extremities indicates a weak heart. The anæmic condition often indicates excremental poisoning. It is scarcely necessary to mention the value of iron, digitalis, strychnine, quinine, and the hypophosphites in patients with weak hearts.

THE DIGESTIVE SYSTEM.—The next division of the human body to which our attention is directed is the alimentary tract. This leads us to take into consideration gastric, intestinal, and hepatic disorders. The well-known tendency of our patients, subjected to inactivity, is to take on hepatic disorders, or perhaps disorders of the portal circulation. It is needless to mention that a certain amount of daily exercise is necessary to human beings to preserve the integrity of their digestive organs. The common links of the chain of disorders in these patients are constipation—the filling up of the portal circulation with excretive matter—and the perversion of the secretions and excretions of the intestines, which mean gastric and intestinal dyspepsia. It is a well-known fact that the liver secretes from two to five pints of bile every twenty-four hours. We all know that in a condition of health there is never passed off from the bowel any such quantity. This large quantity of hepatic secretions is reabsorbed, resecreted, and re-excreted, passing around through the portal circulation no one knows how many times. In all cases of constipation there are absorbed certain amounts of excrement, and we thus have quantities of filth continually circulating through the liver, which must lead to functional disorder. This disorder manifests itself in the imperfect functioning of the stomach and intestines. We have thus the beginning of dyspepsia. Nature indicates to us in many cases a relief for this condition in permitting these patients to have an occasional diarrhœa. Consequently we will find that the beginning of all treatment for the cure of the majority of alimentary disorders, in gynecological patients, should be the daily laxative.

I suppose it is a fact beyond dispute that the majority of cases of dyspepsia present the phenomenon of fermentation. Where stomachs are dilated much, indicating impaired propulsion, gas is eructated and acidity presents itself. The best in-

itial treatment is gastric lavation. I know of nothing so simple as the washing out of the human stomach. It is only now and then that we meet a patient who cannot tolerate it. Such a patient will permit the passage of the tube into the stomach a couple of hours after having taken a dose of bromide. I am in the habit of teaching the most delicate and sensitive patients to wash out their own stomachs. They do it very easily and simply, and all that is necessary is to have some one pour the water into the tube for them. Some patients are so terrified at the use of the stomach-tube that they threaten to never consent to its use. When they get over the dread of its use, after a few times they insist upon introducing the tube themselves. Such patients will have no difficulty in performing gastric lavation upon themselves. I have some patients who have kept up the use, once or twice a week, for months consecutively, after experiencing the limitless advantage which it procures. It is best to use the water as hot as it can be borne. At first oftentimes it will be impossible to syphon out the stomach, because of the large quantities of mucus which will block up the tube. All that can be done is to fill the stomach with hot water until vomiting occurs, or to remove the tube to provoke vomiting by titillation of the fauces. Occasionally it will be found necessary to use some prompt emetic, as a teaspoonful each of mustard and salt in a glass of hot water. In very many cases the first washings will bring away an astonishing mass of mucus. In such instances it is best to wash out the stomach daily, until it seems comparatively free from mucus. Afterward the lavations can be used twice a week. It is best to use them in the morning when the stomach is empty. In cases of acid dyspepsia we can use the bicarbonate of soda, one drachm to the quart. In putrid dyspepsia the best remedy is the permanganate of potassium. When there are vegetable parasites phenic acid is a suitable remedy. Boric acid is an excellent disinfectant. Tincture of myrrh can be used in the atonic dyspepsia. After the daily lavation fails to bring away any evidences of stomach fermentation, it is well to keep up its use once or twice a week for several weeks, during which time the use of antifermentative remedies, as salol, salicylate of bismuth, corrosive sublimate, or sulphocarbolate of zinc, together with artificial digestants, as pepsine, lactopepsine, papoid, and *especially* ingluvin, will hold out the best promise of permanent cure.

Time will not permit me here to speak of the use of electricity applied through the gastric electrode to the stomach.

wall, the application of which has the effect of contracting the stomach, just as the scrotum can be contracted, thus relieving the condition of impaired propulsion.

One of the most common of gynecological patients that we meet with is the vast class presenting constipation, dyspepsia, and anæmia. In these patients the use of the daily laxative, with pepsin or its congeners and the bitter tonics, will be found of the greatest possible advantage. It may be aid down as a simple clinical fact that patients who pass dark feces are patients who need daily laxatives. Patients who have now and then a diarrhœa for a day or two are always in need of a daily laxative. Patients who possess chloasmic spots are patients who are generally the victims of fecal anæmia the result of fecal impaction, and are always benefited by colonic flushings and the daily laxative. It is wise to persist in the use of daily flushings until the dark-colored feces give way to yellow-colored feces. It is well to bear in mind that patients taking iron or bismuth will void dark feces; but when the feces are habitually dark, it is always best to resort to the flushings and the daily laxative.

THE RENAL SYSTEM.—The next division of the human organism is the renal system. Two things in disorders of the kidneys are worthy of the attention of the gynecologist. One is the presence of a super-abundance of lithic, now commonly called uric, acid. The persistent presence of too much uric acid in the system leads to grave functional disorders of the nervous system, joints, and the mucous membranes. Lithæmic patients, predisposed to gastric disorders, very easily take on gastro-duodenitis in all its phases, from simple gastric disorder to the most intractable gastric irritation, constituting the most persistent dyspepsia we have to deal with. The presence of gastro-duodenitis is most easily indicated by pressure toward the body of the vertebræ at the junction of the middle and lowest third of the space, in a straight line between the umbilicus and the ensiform cartilage. If this pressure produces pain and nausea, the presence of gastro-duodenitis is inferred. The tendency of lithæmic patients to neuralgia is well known. We find more cases of renal colic in this disorder than in any other urinary trouble. The citrate of potassium in as large doses as the stomach will bear produces very satisfactory results. Many patients can take as much as a drachm four times a day. It is best administered in some carbonated preparation, as the effervescing Vichy salts. The better, but more costly, remedy is the granular effervescing salts of lithium. It is less obnoxious

to the stomach, and will dissolve a larger percentage of uric acid, than citrate of potassium. It increases the amount of urine. It does not possess the depressing effects on the heart, of the citrate of potassium. It is always advantageous to administer at the same time small doses of mercury daily for some days or weeks. The triturate tablets, containing $\frac{1}{10}$ grain of calomel, are an eligible preparation of mercury.

Another form of renal disorder, and perhaps the less appreciated in its importance, is *renal insufficiency*, about which much has been written in the past five or six years. The average human adult passes anywhere from five to eleven hundred grains of urinary solids every twenty-four hours. Patients who pass habitually a greatly diminished quantity of urinary solids daily, say, for example, 30 to 50 per cent., are patients who are suffering from veritable uræmic poisoning. It is simply astonishing to see how common renal insufficiency is in most gynecological cases. When patients are passing only about 400 grains of urinary solids a day we will find them presenting various degrees of nervous irritability. When the amount is lessened, say to about 300 grains per day, we find this nervous irritability manifested in various urgent ways. When the solids are diminished still further, say to 200 grains per day, we find the invasion of the nervous system so grave as to demand our most solicitous attention. And with the amount still further diminished, say to 100 grains per day, we will find our patient dangerously near to the verge of uræmic convulsions or coma, the condition which we often find in the last stages of gestation.

I never consider a gynecological patient thoroughly examined unless I estimate the amount of urinary solids that she voids daily. I think the determining of the possible presence of renal insufficiency is oftentimes of more importance than that of metritis or of menstrual derangement, for the simple reason that many pelvic derangements run back in this causation, or at least in their perpetuation, to renal insufficiency.

It is a very easy matter to calculate the amount of solids passed daily. The simplest formula is to multiply the last two figures of the specific gravity of the voided urine by the number of ounces of urine passed in twenty-four hours and that product by $1\frac{1}{10}$. We can thus calculate the number of grains of urinary solids passed in twenty-four hours. Women will weigh anywhere from 90 to 180 pounds, and they will pass from 500 to 1100 grains of urinary solids per day. A woman falling below 20 per cent. of what she ought to pass of urinary solids

may be said to be suffering from renal insufficiency. In gynecological work the patients suffering from renal insufficiency are wonderfully benefited by the stimulating diuretics. I have learned to connect, in many cases, amenorrhœa in girls and young women with renal insufficiency. I have seen cases in which the use of stimulating diuretics were the only remedies used to relieve this form of amenorrhœa. One patient may serve as an illustration of this class. An unmarried woman of twenty, who had menstruated five times the previous year, presented the condition of renal insufficiency, with a diminished amount of about 50 per cent. of urinary solids. She suffered also from impacted colon. Colonic flushings were repeated several times, and the stimulating diuretic in the course of thirty days increased her urinary solids to 1300 grains. She ought to have passed 900 grains normally; she was passing only 428 when I first saw her. The diuretic was continued for a period of three months. She menstruated regularly for the next nine months, when the renal insufficiency supervened again and the lapsed menstruation again came on. For the last three years she has been able to watch the condition of the kidneys, and when she increased the amount of urinary solids her menses have appeared with great regularity.

It is a well-known fact that the kidneys, ovaries and tubes spring from the same source embryologically. It is also a well-known fact that patients who suffer from organic disease of the kidneys suffer from irregular menstruation. The article on the relation between the kidney and menstruation is yet to be written. The remedies best suited to the treatment of this disorder are few, comparatively. The foremost remedy that I know of is the old-fashioned combination of digitalis and acetate of potassium. The salts of lithia are also extremely useful.

In the foregoing examination of subjects for the consideration of gynecologists, one can but be impressed with the paucity of suggestions. I have been impelled to the consideration of this subject by the fact that so little attention is paid to the subject of general medical treatment of this class of patients. It is a lamentable fact that so many young physicians, upon graduating, are too much inclined to drift into specialties; and the gynecologist who is unable to get outside of the pelvis in the consideration of the disorders of women is greatly to be pitied.

ENTEROSTOMY AND COLOSTOMY.

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(A Lecture of the Regular Course, Delivered before the Senior Class and Reported by D. A. Orth.)

We reach this evening, in discussing the subject of emergency surgery, the abdomen. The treatment of intestinal obstruction often necessitates the performance of operations that even experts in surgery are not anxious to undertake. There are three operations in connection with intestinal surgery that every surgeon or practitioner should be able to perform at a moment's notice. Suturing of intestinal wounds and operations to relieve immediate symptoms incident to intestinal obstruction. The formation of intestinal fistula, enterostomy and colostomy.

You will readily conceive that the opening of the abdomen for an unknown cause of intestinal obstruction, with the very serious condition of the patient bordering on collapse, is surrounded by many great difficulties; the distended abdomen, the rapid, feeble pulse, the constant vomiting and obstinate constipation, are conditions which render it often exceedingly difficult after opening the abdominal cavity, to find and relieve the mechanical causes of the obstruction. It is for these and other reasons that surgeons are now inclined perhaps more than ever, to substitute for dangerous ordinary measures, under certain conditions, palliative operations such as enterostomy and colostomy. The subject of suturing of intestinal wounds in cases of gun-shot or stab-wounds of the abdomen, always constitutes in our course a special session and in all probability we will take up this subject next Monday

This afternoon I propose to occupy your time by discussing the subject of enterostomy and colostomy, two operations frequently performed to relieve immediate symptoms of mechanical obstruction of the intestines, and I wish that you may become very proficient in the different steps of the operation. An enterostomy consists in the formation of an intestinal fistula, as compared to colostomy, in which case usually the surgeon aims to interrupt the fecal circulation completely, that is, he aims to establish an artificial anus. The former operation

is a palliative measure of treatment of intestinal obstruction, in exceptional cases perhaps curative, and the result of the operation is simply due to relieving the over-distended intestine above the seat of obstruction. It is an operation advised by Nelaton in 1842. It deserves well to be called Nelaton's operation. It is performed as a rule in the right iliac region, because Nelaton pointed out years ago, that in cases of acute intestinal obstruction, the over distended loops can readily be reached in the right iliac fossa, and that the intestinal fistula, as a rule, is not far above the seat of the obstruction. The symptoms which call for the performance of this operation are: complete constipation, absolute interruption of the fecal circulation, great distention of the abdomen, tympanites, repeated attacks of vomiting, no passage of gas per rectum, (another indication that the obstruction is complete) with serious general symptoms, rapid respiration, small, feeble pulse, pallid face, sunken cheeks, and in very serious cases where the fatal termination is near at hand, cold livid extremities, cold perspiration, general symptoms indicative of a general paresis of the vaso motor nerves. It is often that under such circumstances the surgeon has no suspicion as to the exact seat or nature of the obstruction, and when called upon to treat such a case, without adequate assistance, would hesitate of course to open the abdomen widely and search for and relieve the mechanical cause of the obstruction; it is in such cases that you will step in and relieve the symptoms by establishing an intestinal fistula. There are three great objections to performing such an operation. In the first place the intestinal paralysis may have advanced to the extent that even after the formation of an intestinal fistula, the process remains, the tympanites continues, the symptoms of obstruction are not relieved, and the patient dies. The operation should be performed before complete intestinal obstruction has set in, that is, in time. Again the mechanical causes which have led to the obstruction may be an intrinsic source of danger to life, not influenced materially by relieving the over distention by formation of intestinal fistula. For instance, in a case of volvulus, twisting of a loop of intestine on its own axis, the twist may cause complete ischæmia of the intestine, followed by gangrene, and the gangrene will certainly destroy your patient, even after successful enterostomy. In a case of invagination, the intussusceptum may undergo gangrene, and although you have relieved the urgent symptoms caused by the obstruction, the patient dies from local causes produced by the mechanical conditions which have resulted in

intestinal obstruction. The third and last great objection, is the fact that, after you have established an intestinal fistula, and the patient recovers, very frequently the surgeon has to step in and perform a later, a second operation. with a view of closing the fistula. Valid as these objections are we recognize that in many cases the timely performance of an enterostomy, is the direct means of saving life. It may have a direct curative effect in invagination, constrictions, in volvulus, and in cases of intestinal adhesions, by relieving the pressure from above, thus placing the effected segment of intestine in a better condition to recover its normal condition. Under proper conditions you need not hesitate for a moment to resort to Nelaten's enterostomy as a palliative and in some cases as a curative measure. It is an operation therefore that we shall now study carefully step by step. You can perform an enterostomy under the conditions that I have enumerated without the assistance of a general anæsthetic; in fact the administration of a general anæsthetic under such circumstances is attended by unusual danger, so that ordinarily without ample assistance you will perform this operation without the use of chloroform or ether. As a rule the injection of cocaine, unless very carefully made, and adapted to the particular case, is in my estimation attended by more danger than either chloroform or ether, You will be astonished to hear that surgeons now are gradually coming back from the general practice of administering chloroform and ether for trivial operations. A man like Kocher performed a thyroidectomy without the use of a general anæsthetic. If this is possible, without inflicting cruelty in removing a diseased thyroid gland, you can readily see that the making of a button hole in the abdominal wall and anchoring the intestine is a trivial operation as compared with thyroidectomy. All that you will need in performing this operation is a scalpel, a dissecting forceps, ordinary sewing needles, and antiseptic suturing material. You then can perform this operation with the use of instruments in an ordinary pocket case. The operation of course must be performed under careful aseptic precautions so as to avoid producing septic peritonitis, There is great danger under such circumstances of causing peritonitis, because the intestinal wall being permeable to the passage of microbes, any undue violence or any recklessness in following out antiseptic precautions, will be very likely to result in circumscribed, if not in diffuse peritonitis. Perform therefore this little operation under the strictest antiseptic precautions. The operation is performed in the right iliac region; this is the lo-

cation pointed out by Nelaton, and is invariably selected for establishing an intestinal fistula, that is, if it is the intention of the surgeon to open the small intestine, and that is usually what is aimed at in performing an enterostomy. You will find in all such cases the abdomen tense, greatly distended, an entirely different condition from what we have before us now. (Operations discussed in this course are illustrated on the cadaver.) Thus intestinal distention would rather favor the operation than otherwise, because as soon as the abdomen has been opened the intestine will rise into the incision, is then readily accessible, and we can anchor it in the wound without any particular difficulty.

The first thing then to be done is to make the incision through the abdominal wall; I select for this purpose a point one to two and one-half inches above Poupart's ligament, and then make the incision parallel to the ligament. Taking it for granted that you are operating without a general or local anæsthetic, the first cut should be made through the skin and superficial fascia down to the fascia of the external oblique muscle. It is advisable in making the opening through the abdominal wall to cut as few muscular fibres as possible; it is for this reason that the surgeon makes the incision parallel to the fibres of the external oblique; when we come down to the internal oblique we shall do more tearing than cutting. Place the patient in a favorable position upon a table, if you have nothing else but a kitchen table, because operating in bed there is too much play room for your patient, and it is very difficult to get at the site of the operation. Place him therefore properly in the dorsal recumbent position upon a table. We have now cut down to the external oblique fibres which we divide carefully. Cut exactly in the direction of the fibres, and then enlarge the wound. Now we pick up the internal oblique. This muscle I will simply pick and make a very small button hole in it; we will do that by lifting up the muscle with forceps, because if the abdomen is distended you may readily cut the muscle to the desired extent without the use of dissecting forceps. I pick up that muscle now and I incise the balance of the wound by tearing rather than cutting. I have an opening now into the internal oblique which corresponds in size to that of the external oblique. Now comes the time to make use of your dissecting forceps to pick up the transversalis and peritoneum, which we will now do. Then I make the incision parallel to the internal oblique about one and one-half inches in length, which is about the size of the wound and the exact

location. It is very strange, gentlemen, that in cases of an acute intestinal obstruction, regardless of the anatomical seat of the obstruction, the intestinal tympanitic loops are always found immediately underneath the abdominal wall. They float, as it were, upon the seat of obstruction. I have seen two-thirds of the intestinal canal compressed into a mass not larger than a man's fist packed away into the pelvis or on one side of the pelvis, hard to find even after making a free incision through the abdominal wall.

Remember that the intestine above the obstruction is distended, tympanitic, vascular; below the obstruction palid, empty, collapsed, so that after making this little button hole in the abdominal wall, if the distended loop presents itself, as it will, you know you open the bowel above the obstruction, because it would be a terrible thing of course, as far as the case is concerned, if you should anchor in this wound and open an empty loop below the obstruction. The intestinal fistula must be established above the obstruction, and, as Nelaton pointed out, by making the incision in this location by grasping and anchoring the first intestinal loop that presents itself and establishing a fistula, the surgeon will find the opening in the intestine not very far from the site of the obstruction. As you have opened the peritoneum perhaps some serum or bloody serum will escape. In cases of intensely acute intestinal obstruction, or in cases in which the mechanical causes of the obstruction have resulted in gangrene, sloughing, etc., this will escape. Then you come face to face with the distended intestinal loop that is intensely red, very vascular, that has perhaps lost its glossy surface, because the intestinal wall under such a strain for any length of time will undergo speedy changes. You will be astonished in making your first operation, for either acute or chronic obstruction to find the extent to which the small intestine is often distended; as large as the arm, with the corresponding thinning out of the intestinal wall; the intestinal wall being often no thicker than ordinary writing paper, the attenuation being proportionate with the speed with which it occurred. In chronic cases often thickening of the intestinal wall first compensatory hypertrophy, and later thinning out of the hypertrophied wall. So that in acute cases you must be careful, and take this into account in suturing the intestine, otherwise you will pass your needle through the entire thickness of the intestinal wall. Remember, then, the extent to which the intestinal wall can be thinned out.

We have now the distended, vascular intestinal loop imme-

diately underneath this opening, and I will now grasp the intestine and anchor it in the wound. Our object here now is to establish a fistula only, to relieve the distention, the result of accumulation of gas and liquid intestinal contents. I do not wish to completely interrupt the fecal circulation, because I am making an operation which I hope may prove to be a life-saving one, and under the effects of which the mechanical cause might possibly disappear, so that the operation may prove curative results.

It used to be my custom in making this operation to line the margins of the wound with the parietal peritoneum; thus I sutured the parietal peritoneum to the free margin of the skin, all around like a button hole. I regarded this as necessary because I feared that if this was not done, there would be greater danger of infection of the wound after establishing intestinal fistula, with numerous sources of infection. I also believed that the serous surface became much more readily attached to the margins of the wound by lining the margins of the wound to the peritoneum. We have every reason now to abandon this practice, because Blacksmith has shown very recently that a serous surface if brought in contact with an ordinary wound surface will become as readily attached and adherent as when brought in contact with another serous surface, and I am glad to avail myself of this operation in the future, and now anchor the intestinal loop simply to the skin. This will greatly shorten the operation; and I have great faith that the intestinal loop, coming in contact with the torn muscle, will within twenty-four to forty-eight hours become attached with sufficient firmness to prevent contamination.

I shall therefore now anchor the intestine to the external skin. I take for this purpose, a simple, ordinary cambric needle, and never a surgeon's needle. Make the stitch through the sero-muscular coat, not through the loop of the intestine. I suture now the convex side of the wall. I use not more of the intestinal surface than the size of a nickle. Now I take the intestine right opposite the mesentary; now I suture the skin on the opposite side. I have made here five stitches. Now I put another stitch here, pick up the intestine here at the center same as opposite side, suturing the skin here, and now I have sufficiently sutured the intestinal wall. Now each one of these strings is cut long; now if I tie these together we will draw the intestine together all around up to the skin; an additional security in anchoring the intestine in preventing infection. We can now cut these stitches short, there is now no

danger whatever of the escape of intestinal contents into the peritoneal cavity; not a particle. Therefore after suturing the intestine properly in the wound, as I have done, comes the time to open the intestine. It should be done transversely always. We make now a little transverse incision large enough perhaps to insert an ordinary lead pencil, not larger, because we are making a fistula, and not an artificial anus. I pick up now the intestine and make a transverse incision. I have now a little opening here through which I could readily insert an ordinary lead pencil; that is all that is necessary.

You will be probably a little disappointed the first time you make the operation, when only a small quantity of gas escapes, because the intestine has been rendered paretic, and it will take sometimes one-half to an hour after relieving this segment of the intestine, before the remaining portion of the intestine recovers from this paretic condition. In a few hours the whole field will be flooded, if the operation is successful. This fistula should be kept patent until you have indications that the continuity of the intestinal canal has become restored by the escape of flatus, when efforts should be made to close the intestinal opening by using the cautery, nitrate of silver to stimulate the granulations. If this does not meet the desired result of course an operation will become necessary to close the fistula. Under such circumstances this can be done without opening the peritoneal cavity. Vivify the margins of the fistulous opening clear into the lumen of the bowel, skin, fascia, intestinal wall, mucous membrane, so as to have a raw surface all around; then suture first the mucous membrane of the intestine, then a row of sutures should include the remaining thickness of the intestinal wall, and the third row of sutures will include the tissues outside of the intestinal wall, and all of these sutures should be aided by an additional row which should include all the structures except the mucous membrane, and remember suture transversely. If this should fail there is no other alternative left than to open the peritoneal cavity, detaching the bowel and suturing the bowel transversely.

We have made now a fistula, on the opposite side I wish to establish an artificial anus; in cases in which the obstruction is below the sigmoid flexure and the rectum. I wish to make now a colostomy. I will simply go over the different steps. The incision is made on the right side; it is a left inguinal colostomy, and the plan that has been followed has been laid down by Maydl, and is therefore called Maydl's operation. The incision is made in the same manner and about in the same lo-

cation when on the opposite side, but is made considerably larger, because I wish to anchor in the wound the sigmoid flexure. In reality the operation in a majority of cases is a sigmoidostomy, because usually the sigmoid flexure is opened. The operation is therefore performed for an obstruction always below the sigmoid flexure. Right inguinal colostomy or colostomy of the transverse colon is called for when the obstruction is a little above the sigmoid flexure, that is the colon is opened above the seat of flexure. The colostomy is therefore made with especial reference to the seat of obstruction. In the majority of cases, with very few exceptions indeed, this operation is performed for incurable obstructive affections, and that is the reason why we not only wish to establish an intestinal fistula, but to interrupt the fecal circulation completely, so as to place the effected part of the bowel at rest.

THE "TACTUS ERUDITUS"—WHAT IS IT?—HOW CAN IT BE ACQUIRED?

Formerly it was the custom, and indeed in many circles, even now, it is the habit, to ascribe any unusual expertness in diagnosis among gynæcologists to the happy possession by that person of what is called the *tactus eruditus*. In just what the *tactus eruditus* consisted, whether a peculiar endowment of the gods akin to genius, or an extraordinary development of the tactile corpuscles in the forefinger of the left hand, no one yet has been willing to affirm. Its existence however, is an accepted fact, and it constitutes a large factor in the armamentarium of the skilled gynæcological diagnostician.

But let us not look to any remarkable manifestation of the gods to discover this faculty; for, as St. Paul said of the Kingdom of Heaven, "Behold, it is within you." The "*tactus eruditus*" does not reside in the end of the finger, but, strange as it may seem, it is located in a well trained habit of the mind. It consists in the faculty of making a mental picture of what the sense of touch discovers and conveys to it.

It is the same faculty upon which the blind man depends for his information of the outside world, and there is no doubt that his mental picture of form, size and relation of external objects is quite as clear and distinct as though it were pictured upon the retina of his eye. As his fingers glide over the raised letters of his reading book, his mind is attentively engaged in photographing the impressions thus conveyed till the mental

picture thus formed is as complete and distinct as though it had been received through the organ of vision,—or, as we commonly express it, “he sees with his fingers.”

Without mental attention there is no conscious vision, Sever the optic nerve, and the faculty of sight is destroyed, although the picture on the retina of the eye be ever so clear. The mental effort involved in the process of vision is so unconscious that we are hardly aware that it exists. So that the mental effort necessary to make an image of what the finger touches seems at first a new faculty. But it soon becomes a habit, and produces a picture quite as distinct as the eye can convey. Close mental attention, then, to the subject in hand, and the cultivation of the habit of making a mental picture of what the sense of touch discovers, is the secret of the *tactus eruditus*.

There is a familiar story of a celebrated gynæcologist before whom a patient appeared one day, narrated her trials and her history, and insisted that she had been under his care before. But no incident or condition that she could recall would convince him that he had ever seen her. The moment, however, that his bimanual touch was applied, the most minute details of her case came to him in striking outline; and he exclaimed, “If you had only shown me your pelvis at first instead of your face I would have recognized you at once.”

His touch had simply brushed off the dust from a mental picture that had been stowed away in his psychological garret for years.

But, intimately associated with the gynæcologist as this *tactus eruditus* has been, it is not his individual property, but subserves the purpose of all medical men in what may be known under a broader acceptance as the scientific imagination. This is a faculty worthy of more definite recognition and systematic cultivation. To the obstetrician it is indispensable. Indeed, no man is properly equipped for obstetric work who cannot make a complete and perfect mental picture of the child's head and its relation to the maternal parts at any and every stage of its progress, and so follow it in his mind's eye through its tortuous course to complete delivery. Nor should this be crudely done, but the lines of the picture of every stage in its progress should be drawn “with the fineness of an artist's touch.” Then will the cause of the obstruction in any abnormal case be correctly understood, and deftness of touch and delicacy of manipulation will take the place of brute force at the end of the omnipresent forceps.

The delicate work of the abdominal surgeon demands also, this accurate scientific imagination. The Trendelenburg posture has brought into the field of vision much that was formerly seen only through the sense of touch. But in all this work, both what is exposed to the eye and what is revealed only through the sense of touch, the imagination should move on in advance of the actual work, making its mental picture of every step and process of the operation and its accomplished result even before it has actually been undertaken. This picture is the standard by which the operator judges his actual work, and thereby knows whether he is going right or wrong, and how far the exigencies of the case compel him to depart from what is usual or normal.

In the sphere of the auscultatory science, the specialist in the heart and lungs has even greater need of this scientific imagination. With him, however, the mental picture of the physiological or pathological process is derived through an entirely different channel; viz. the sense of hearing. But without this faculty of forming a mental picture of the condition which produces the various sounds—the fine, the dry and the crepitant rale, or the amphoric breathing, is as unintelligible as the progress of civilization to the schoolboy, who rattles off his history lesson by the yard. He may be able to repeat what the books tell him,—that the fine, dry, crepitant rale is characteristic of pneumonia, and the amphoric breathing indicates a dilated bronchus or a tubercular cavity, but the soul and essence of the thing, the feature that gives it interest, that makes the study of disease an endless pleasure, and which alone can lift the practice of medicine above the level of the routine grind, viz. the scientific imagination, is not there.

But why should we limit this to any specified field? For its application is as broad as physiology and as comprehensive as the most intricate pathological process. By the exercise of this faculty we follow the diseased process in all its manifold destruction of vital tissue; on the other hand, we see nature in her delicate building-up of structures, in the process of repair and growth.

The *tactus eruditus* is simply one phase of this scientific imagination.—*Am. M. S. Bul.*

REPORT ON A CASE OF DIAPHRAGMATIC HERNIA.

The case was found on one of the tables in the dissecting-room at Rush Medical College, Nov. 19, 1895.

The history obtainable was very meager, as the subject came from the Infirmary at Dunning; but I will give what I could learn through the kindness of Dr. McGrew, who examined the records for me. Name, John Houlihan; nativity, France; (the doctor vouches for this rather incongruous statement as being part of the record, but it doesn't sound just right); age, between 50 and 60 years; white; education, poor; occupation, cook; habits, intemperate; height, 5 feet, 2 inches. Such was the history. The subject was fairly well nourished and presented no external appearance of any trouble having unfavorably influenced his development.

There was some deformity in the right thigh and leg due to old fracture.

There was an intracapsular fracture of the neck of the femur with good union and about one inch shortening. The tibia and fibula of the same side were also fractured, the former at the lower quarter, the latter at the upper part, a very common condition in double fracture of the bones of the leg. All fractures were old and probably synchronous.

There was also a fracture in the 6th and 7th costal cartilages of the right side, union having occurred with some deformity, but seemingly in no way influencing the contents of thorax or affecting the diaphragm at its point of attachment. Mensuration of the thorax showed both sides exactly symmetrical, each measuring at the level of the 3rd costal cartilage, $14\frac{3}{4}$ inches from spine to mid-sternum; and at the 5th, $15\frac{1}{2}$ inches on either side.

As the subject was on the table for dissection, the abdominal cavity was opened after the muscles had been dissected and the unusual condition of affairs discovered in the course of the regular examination of contents in situ.

The peritoneum was normal with a few scattered adhesions in the common peritonitic regions.

Small intestines normal, except that the duodenum with the pyloric end of the stomach, was drawn slightly upwards just to the border of the opening in the diaphragm.

Stomach normal in position except as mentioned above.

Large Intestine.—The hepatic flexure was attached at its convexity by some adhesions, so that it appeared to be suspended from the right border of the opening in the diaphragm, the adhesions arising from the pleural surface, as shown in cut No. 1.

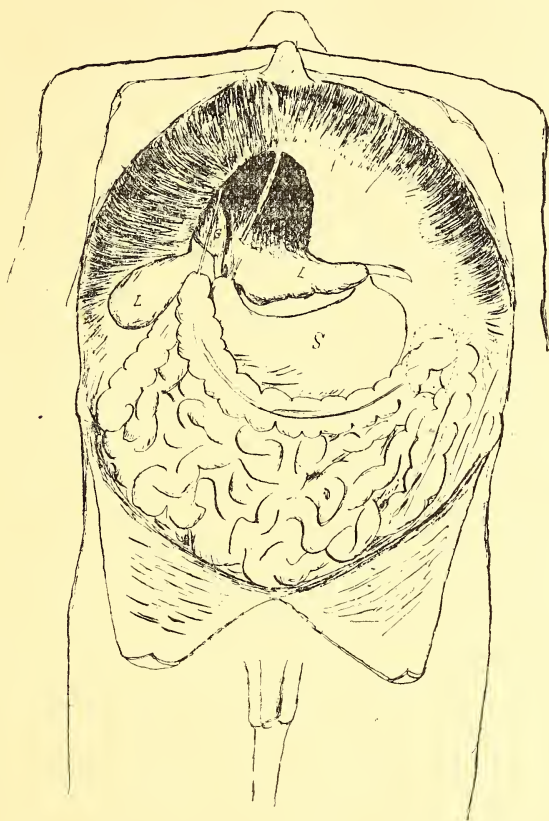


Fig 1

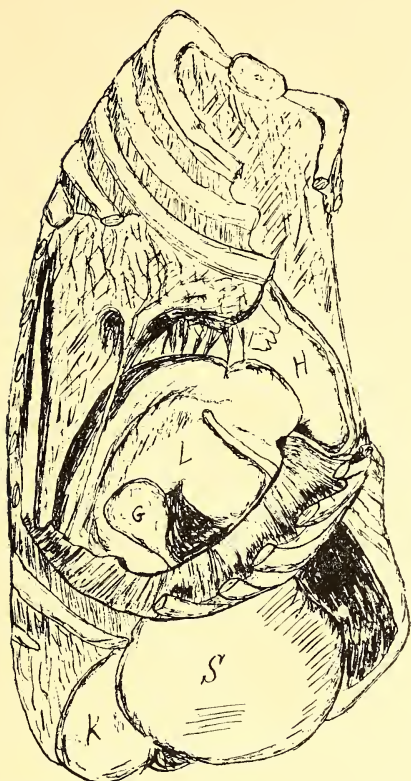
The splenic flexure was firmly bound to the diaphragm, by the costo-colic ligament and some adhesion, behind which was a pouch formed of peritoneum containing the spleen, which was quite invisible until lifted out of its pocket. The dotted line in cut shows position. It was normal in size and in proper relation to stomach but I had never seen it in such a position, behind the peritoneum, before.

The chief point of interest was the diaphragm. In the central tendon, involving principally the right leaflet with some of the muscular substance, was an elliptical opening with the long diameter antero-posteriorly, the anterior extremity

being somewhat nearer the median line. The opening measured $4\frac{1}{2}$ by $3\frac{3}{4}$ inches, and was partially filled by the liver which extended into the right pleural cavity.

The border of the opening was free in the greater part of its extent, mostly in front, as shown in cut; at the back part, although easily discerned as a cord-like edge, yet it was covered by the liver and afforded attachment in an irregular manner to the posterior ligaments of that organ. The border was of nearly the same thickness all around, about 2 mm., and fibrous in structure, and covered by the peritoneum, which was directly continuous with the pleura, the two cavities being practically one. The hand could be passed up into the right pleural cavity on to the lung and upper surface of the liver, no hernial sac being present. The muscle fibres terminated abruptly at the fibrous border, except where it involved the central tendon. At no place was the opening nearer than two inches to the attached border of the diaphragm, unless possibly behind, but the border of the opening was distinct even there.

Liver.—The liver measured $6 \times 6 \times 2\frac{1}{2}$ inches somewhat changed in shape by its position. The largest part, involving most of both lobes, was in the right pleural cavity, and when the subject was placed upright its position with relation to the diaphragm was not materially changed, both descending somewhat but adhesions between the liver and lung and costal pleura retained the organ nearly in the same position it occupied when recumbent. The upper border was even with the fourth costal cartilage in front, reaching the fifth, and sixth ribs laterally, so that its position was not changed very much with relation to surface topography. The anterior body usually sharp was uppermost and broadened like the posterior border of the normal liver. The superior surface became posterior and lay against the posterior thoracic wall, a small portion of lung substance intervening through part of its extent. The under surface with the gall bladder was anterior and could be plainly seen from below although most of it was above the level of the diaphragm. The gall bladder was partially distended with bile and was normal in size. The common duct extended to the duodenum at the level of the opening. The round ligament was free for the first two or three inches from the liver and became surrounded by the falciform as soon as it entered the abdominal cavity on the under surface of the diaphragm.

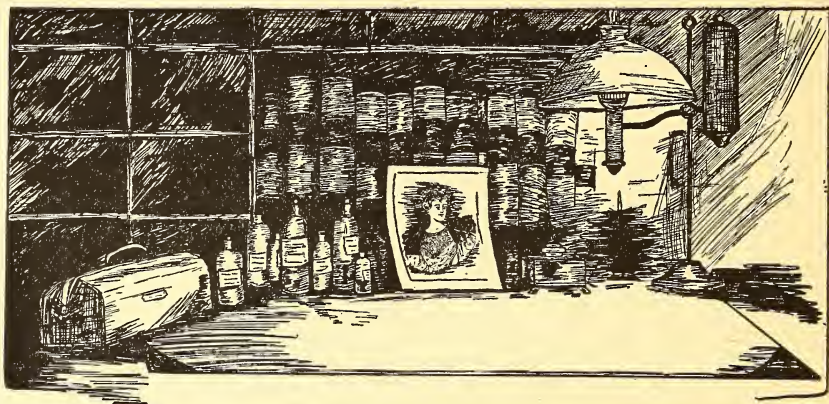


Cut No. 2 shows the appearance from the thoracic side. The ribs from the fourth to the tenth inclusive, have been removed enough to show the relation of parts above the diaphragm.

A large portion of the liver is visible, with the gall bladder and duct and the beginning of the round ligament. Above and behind is the right lung which is firmly adherent to the ribs, and numerous adhesions connect it with the upper and posterior surface of the liver. One long cord of fibrous tissue stretches across the right margin of the exposed surface and is attached below to the diaphragm under the border of the liver.

The lung came to the fourth rib and cartilage in front, while behind a narrow lobe extended down to the diaphragm where it was adherent. The left lung had also numerous adhesions and was quite firmly attached to the pericardium, which with its contents was pushed slightly to the left of its usual position. Heart appeared normal but was not opened.

The specimen will be placed in the museum of Rush beside two other interesting specimens of a similar nature and somewhat smaller size. Although diaphragmatic hernia is far from common, yet the literature upon the subject and reports of cases would fill a good-sized volume. CHAS. A. PARKER.



AT WHAT TIME, AND UNDER WHAT CIRCUMSTANCES, SHOULD A YOUNG PHYSICIAN MARRY?

(A Symposium.)

THE CORPUSCLE has thought that a few words on this subject might be of interest to the numerous young men about to graduate, and those who have recently left the college, we therefore addressed personal letters to the several members of the Faculty, asking their opinion on the subject to be stated in as few words as possible and do the subject proper justice.

Every rightly constituted young man, whether he be a student of Medicine, Law or Theology, a craftsman or a tiller of the soil, finds himself at some odd moment contemplating the time when he may become a benedict. Then there usually follows a dreamy reverie, with an intermingling of observations and calculations touching upon the policy and advisability of such a step for him. The result of such vagrant seance is, in most cases, largely determined by the susceptibility of the particular individual to the charms of that one who has thus focused his attention and inspired this serious thought.

We shall take it for granted, however, that circumstances have not led so far but that calm, cold judgment may claim a proper consideration of all those factors that enter into the production of a happy and successful married life, in which

instance, not a few of the following hints and bits of advice may be found worthy of consideration.

If located in the country, where he can devote himself to family practice alone, the young physician should marry as soon as he can find the right kind of a girl to help him in his chosen career. A married physician generally reaps success more rapidly among his married contemporaries than if he remain single.

But, if the youthful scholar aspires to reputation as a special worker in some particular department of medicine or surgery, he must either have at his command considerable pecuniary resources, or else should defer marriage until his feet are firmly placed upon the ladder of fame.

Under any circumstances, it is better to move with deliberate caution in so important a matter as entrance upon the estate of matrimony. The young man who has his own way to make should, at least, be able to fit up an attractive office, and to supply himself with the necessary books and instruments for the efficient practice of his profession, before undertaking to invest in the paraphernalia of a feminine wardrobe; otherwise, ostrich feathers will be secured to the exclusion of books and periodicals, and a rising family will engross attention that should have been directed to the medical society.

Besides this, the fledgling doctor who makes haste to marry will too often find leisure for repentance in after life, by reason of the change in his circumstances. As he grows older, and acquires wisdom, unless care be taken, he may grow away from his secluded wife; and he may awake some day to a consciousness of incompatibility between himself and the child-wife who is no longer his social equal. Had he been content to delay his choice until he had seen the world, and had found his level in it, all that might have been avoided.

HENRY M. LYMAN.

If twenty-five years old, with a location selected, a modest sign hung and paid for, with a right-minded affinity for the party of the second part discovered, and with money enough to pay the parson, then the sooner the better, whether viewed from the standpoint of growth in character and reputation, social standing and professional success or of providing against the poor-house or the rainy day which is liable to come to any man sooner or later. This for a general rule. For the exceptions consult the oracles.

D. W. GRAHAM.

In reply to your query, "At what time and under what circumstances should a young physician marry?" I am prompted to reply, at once: "Just as soon as he can find the girl." I realize, however, that the question merits a more careful reply than this would seem to be, for a prudent man, be he physician or not, must necessarily consider many duties and obligations before taking to himself a wife. A man must first of all be able to give the woman of his choice a comfortable home; but I can testify that a good wife will help a doctor to provide a home for two almost as easily as he can provide one for himself alone.

A physician, more than any other man perhaps needs the joys and comforts of home life and is as much entitled to them. Therefore, my answer will be that a young doctor should marry just as soon as he is able to earn a comfortable living for himself and little more and feels sure that he has found the right girl.

If the question were simply in regard to age, I would say that most men would do better to marry as soon as possible after complete maturity, which perhaps is reached at about the 25th year.

Very sincerely yours,

CASSIUS D. WESCOTT.

A young physician should, in my opinion, marry the woman he loves and who loves him at the earliest possible opportunity.

LUDVIG HEKTOEN.

The most enchanting picture upon which a young man or a young woman gazes is the imaginary picture of the future home.

Alas! that the home of the fancy should often differ from the actual home as heavenly happiness from direst misery.

Marriage is possibly *the* momentous step of one's life. It may bring inestimable good or unspeakable evil. It is not well to dwell on the evil, however, nor to treasure in the heart the adverse advice and the sarcasm of the cynical. If no wise man can always be content with himself, he has no right to expect perfection in his wife. It is the duty, therefore, of the man and of the woman to cultivate patience—that patience which can bear and forbear. There may be a grain of wisdom in the precept of the Grecian sage, who said to the young man, wait: to the old man, never.

The young physician should wait till he has at least an in-

come sufficient for his own support. When he has secured this I advise him to read carefully the last twenty-two verses of "The book of Proverbs"—to form habits and a character which will make him worthy of such a wife as is there described—and to seek at once her who is as near as possible to this ideal.

E. L. HOLMES.

When he is about 25 to 30 years of age providing he is able to earn enough to support himself and 150 per cent. more on which to support the wife, and from which he may save a little for the future. He should not marry until he finds his equal—mentally and socially and believes he *cannot possibly live* without her companionship.

E. FLETCHER INGALS.

A young physician should not marry until he is in love with a girl who loves him. It is a great deal better to fall in love before getting married—the old-fashioned way—than to marry first and hope to fall in love afterwards. I have been credibly informed that a young man once married after the latter plan, the love did not develop, in its place came unhappiness and sorrow. If it has happened once it might happen again. So I say marry only when you are in love.

Secondly, marry as soon after graduation as you can afford it. But here everything depends—depends on you and her, on where you live and how you intend to live. The thousand dollars a year that would keep one young couple comfortably, will not pay for the clothing and the livery bills of another. It all depends, you see. So do not marry until you can support yourself and your wife according to your station. But remember this, that many a woman will be a positive saving in cash, a good financial investment. A modest home, economically conducted, may take less money than does the bachelor's boarding-house home.

A married doctor will often find his practice doubled merely because he has married. "Nothing venture, nothing win," applies to marriage.

And so I say, marry as soon as you have a reasonable prospect of supporting yourself and wife, but never until you are sure you have found the one who will be in very truth your better half.

JAMES B. HERRICK.

I am in receipt of your favor of the fifteenth inst. asking me to express in a few hundred words only my views on the momentous question: "At what time, and under what circumstances, should a young physician marry?"

As to the time I should think Sunday undesirable, seeing that it is "hospital day" almost the world over; and Monday is objectionable for the city physician as many of his country patients consult him then after coming in town to spend Sunday with their friends. Tuesday is ironing-day among most Christian people; Wednesday evening by the piously inclined, is given to the prayer-meeting rather than to the marriage feast and dance; Friday is always esteemed unlucky; and for Western physicians bent on a honeymoon abroad, Saturday is too late in the week to permit one to reach the New York steamers sailing on that day for Europe. Hence I advise Thursday, and of course not in May, which is esteemed unlucky of all brides; but in June which Lowell asserts to be the month of "perfect days." The earlier the better; so I would pronounce in favor of the first Thursday in June and at the hour naturally of high noon.

As for the "circumstances," upon many of those the bride should decide (to say nothing of selection of the date for the wedding-day) but she will of course wear "something old and something new; something borrowed and something blue;" while the bridegroom, if at all fond of the customs of antiquity, might elect to "wear in his hatt a hand-kercher wrought with blue Coventry" as in the days of Queep Bess.

All said and done, however, I would recommend the young physican to marry at the same time and under the same circumstances as those fit for any old physician, and that is when he can swear in the language of the late English laureate:

"Here by God's grace is the one voice for me!"

Yours truly, JAMES NEVINS HYDE.

It certainly is a common-sense proposition that a man should be able to meet the expenses incident to his taking a wife, before considering marriage, and he who has the happiness of his future wife thoroughly at heart should be willing to defer marriage till such a time as he should become so securely established in his profession as to afford his wife and himself food, shelter, and clothing. To work out together the problem of "getting on in the world," sharing each others struggles, hardships, and the fruits of them—the after successes—make up, largely, true domestic happiness. The question can hard-

ly narrow itself down to the above, however. A true wife, one with compatibility, should be a helpmeet and can undoubtedly contribute largely to the success of the young physician in a thousand ways. The community as a whole has prejudices in favor of the married physician. Social influences, business details, home comfort and encouragement, may largely rest in the hands of the doctor's wife. In early years, before habits are fixed, husband and wife become more easily adapted to each other, and their lives blend the more surely in the formation of a harmonious marriage. Marriage should come as early as material support is in sight, provided always, the young doctor marries the best and only girl in the world for him.

JOHN EDWIN RHODES.

In my opinion the young doctor should marry as soon as he becomes so well established that he can support himself and his wife, and pay his current expenses. This does not mean that he shall be out of debt for his college expenses, but that his current receipts will be equal to his current expenses. No one has a right to bring suffering and sorrow on any one else and this course as recommended is security against any such complication.

Yours, JOHN B. HAMILTON.

In reply to you question, "At what time and under what circumstances should a young physician marry?" let me note that this is a subject to which I have devoted so much time and thought that my opinion must be allowed the value of expert testimony.

Find the right woman, convince her that you are the right man and marry her as soon as you can persuade her to set the day.

ARTHUR DEAN BEVAN.

When shall the young physician get married? Only when the power of attraction between the "me and her" is so pure and strong that

"Two souls with but a single thought,
Two hearts that beat as one."

Then and only then, should be the when, Under such conditions, there would be an even balance between the intellectual and the physical. You remember there are two schools, that of Plato, the ideal, the intellectual (the more beautiful) and that of Schopenhauer, the physical. It would be better not to

be wholly of the one nor of the other, but of both; I should recommend proportionately of Plato 60 per cent., of Schopenhauer 40 per cent., this will yield the best results and happiness will follow.

Under what circumstances: You must have money, especially if you go double Where your responsibilities and duties are the greater, likewise your pleasure and contentment in their well doing is the greater. Your home is your castle. Its happiness and its influence will depend upon both your efforts, and much upon your income, not wholly so, but to a great extent. Never marry for policy! You will only make both miserable. But if you can't meet these conditions, then what?

Better go it alone, be platonic, do as the celibate does; devote yourself to your profession and its demands. Don't join *Les Bohemes*, don't, no stitching known will sew up its lacerations or restore the heart to its former function. Even to dwell on the borderland of Bohemia, don't, lest the temptation carry you over. There is but one state for a man to be ideally happy in, it is the married state.

F. A. STAHL.

A young physician should marry as early as possible after completing his college course, as a *good* wife is a great help-mate to a young professional man. I am sure that what little success I have attained is largely due to the direction and influence of my wife, who has increased my practice more than any other one factor.

Finances cut little or no figure in the matter as I am convinced that a young married man and his wife can live on about the same as it would ordinarily take to support him alone, since in home life a great number of bachelor extravagances are curtailed and that too without the infliction of any discomfort.

The counsel comfort and encouragement of a *good, true* wife are I am sure the greatest blessings any young man can enjoy and I wish to be set down as an advocate of early marriage.

DAN'L R. BROWER.

When should the young doctor marry? Firstly, when he is a doctor, not until then. Men have pursued the study of medicine after marriage, but always at a disadvantage and if possible, the young doctor should procure his degree, his hospital experience (if he is so fortunate as to secure an interne-

ship) and even his post-graduate course in the laboratories and hospitals of Europe before he marries.

Secondly, when he is sure that he has found the woman he loves. Fortunately or otherwise this is not usually a matter of judgment in this free country of ours but is solved by the mischievous little winged god of the bow and arrow.

Thirdly, when his financial circumstances are such as to insure his ability to properly support a wife and family. And this is a question involving many factors and one which must be settled by each man for himself. An annual income of \$1,000 or less might fully suffice under some circumstances, an income of \$5,000 be wholly inadequate under others; the doctor's present income may be insufficient and yet the very fact of his marriage be almost certain to increase it to an adequate amount; his prospective bride may have an income of her own, and he ought not to allow a false sense of delicacy and a foolish determination to be independent, to postpone her happiness and his own. It does not seem to me therefore that one can offer advice of much value on this important phase of the problem.

J. M. DODSON.

The proper time and circumstances under which a young physician should marry is, to use a slang phrase, "when he gets good and ready."

A. C. COTTON.

Dr. Haines claimed to be too busy to write his opinion, but very kindly submitted to an interview, in which he said that he thought: Of all men, the physician and clergyman should most certainly be married men, by reason of the relations which they sustain to the gentler sex. It is reasonable to suppose that the spiritual and physical directions given to women by these two professions, are more acceptable from one known to be acquainted with the married state, than from one who is a stranger thereto.

In just such degree as it is imperative for physicians and clergymen to be married men, it is also unfortunate if their domestic relations are not of the most pleasant kind, for such family discord in the case of these two professions tend to impair the usefulness of the individual implicated more than in other walks of life, and it becomes therefore a matter of especially serious moment to the young physician to find a woman whom he can both respect and love. The ill defined conception of just what love is, makes it difficult to express as

opinion regarding the feeling which a young man should entertain towards his wife to be. Charlotte Bronte has said, happy is she who deeply respects, even though she does not love her husband, for if she respects him, she will be happy and may learn to love him, while if he fails to command her respect she will later shrink from him.

With all this in mind, and when a young man is so located that he can provide for a wife in comfort (for to do less, is cruelty) it is well that he marries.

We are sorry not to have received word from all members of the faculty, but were unable to await their arrival before going to press.



AN ANNOUNCEMENT.

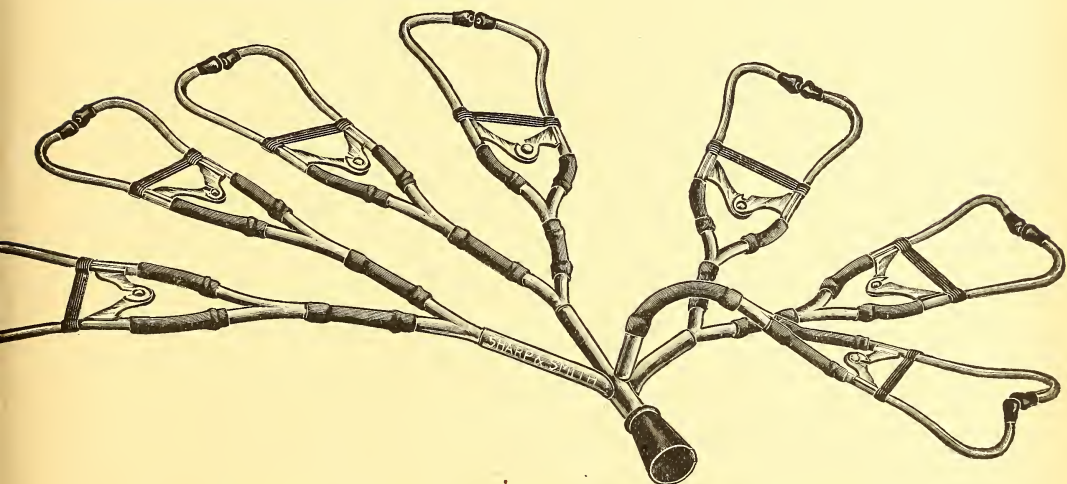
It is with great pleasure that I am able to announce that President John M. Coulter, of our University, long distinguished as an investigator in the department of Botany—vegetable biology, will deliver a series of lectures to the Freshman and Sophomore classes, in the upper amphitheatre of the college building, Friday evening, Jan'y 17th, 24th and 31st and possibly Feb. 7th, on "The Physical Basis of Life."

JOHN M. DODSON, Prof. of Physiology.

A MULTIPLEX STETHOSCOPE.

Prominent among that energetic and progressive class of young men connected with the teaching corps of the college, and who have done so much to advance the interests and reputation of "Old Rush" as a thoroughly first-class institution, is Arthur M. Corwin, M. D., Instructor in Physical Diagnosis.

The Doctor is a thorough friend of the student and is ever making efforts to place their work before them in such a way that it will be readily understood and retained. One of such efforts on his part, is the perfection of the multiplex stethoscope, a device whereby several students are enabled to examine a patient simultaneously.



The instrument here represented will accommodate six students seated in a semi-circle close about the patient, who, if occupying a revolving seat, may be rotated as desired to make all parts of the chest conveniently accessible. The demonstrator stands behind the patient and by a seventh stethoscope, connected at right angles to the main chest piece, is enabled to listen with the others and to manipulate both instrument and subject. When the ear pieces are all in place there need be no handling of the apparatus by the students. Necessary questions are readily heard and answered without the removal of ear pieces, so that there is no more difficulty in avoiding extraneous friction sounds than in the use of a single stethoscope.

As to the size of the tubes used, all stethoscopes should be constructed so that the internal caliber of ear pieces and main arms of the instrument is about that of the external auditory canal, as exemplified in the ordinary Knight's stethoscope, after which the metallic arms of the instrument are patterned.

In my experience, no better results can be obtained by a larger caliber than this. If the caliber is smaller, there is to my ear a decided decrease in the distinctness with which sounds may be heard.

Short pieces of stiff rubber tubing are used in connecting the metallic parts of the multiplex instrument. The distance from the extremity of the chest piece to each ear piece is about 22 inches. Further than this the relation of the parts is too obvious to need description.

Dr. Corwin has also issued a very creditable little outline on Physical Diagnosis of the Thorax, in which, as he states in his preface, an effort has been made to present the salient points of the subject in such a way that they may be more readily grasped by those who are too busy, while in medical college, to seek them out of extensive treatises and arrange them for proper assimilation.

SELECTION.

ABDOMINAL SECTION BY COW'S HORN.

Skilling (*Am. Jour. Obstet.*, July, 1895) records a case in which this accidental operation was performed without a fatal result in a non-pregnant woman. The injury is of interest in relation to well-known instances of successful Cæsarean section carried out in the same manner. Skilling was called in shortly after the accident. The patient lay in bed, her clothing saturated with blood. Her countenance was anxious and pale, but there was only slight evidence of impending shock. The cow's horn had entered the abdomen just above the symphysis, a little to the right of the median line, and ran obliquely to the right, making a rent six inches long. The peritoneum was involved; the intestines protruded; loss of blood was relatively trifling. The intestines were replaced, the peritoneum closed by a continuous suture of fine silk, and the remaining layers of the parietes by interrupted silk sutures. The wound healed almost throughout by first intention except at the lower angle, where slight suppuration took place, probably from unavoidable contamination with dirt during or after the accident. Recovery was rapid and complete.

Alumni Department

JOHN MILTON DODSON, A. M., M. D., EDITOR.

MEMBERSHIP IN THE ALUMNI ASSOCIATION OF RUSH MEDICAL COLLEGE is obtainable at any time by graduates of the College, providing they are in good standing in the profession, and shall pay the annual dues, \$1.00. This fee includes a subscription to THE CORPUSCLE for the current year. This journal is the official organ of the Association.

Dues and all communications relating to the Association should be sent to
JOHN EDWIN RHODES, M.D., Sec'y and Treas., 34 Washington St., Chicago

'95—We are much pleased to announce the marriage, on December 16th, 1895 of Dr. Walter Haines Lewis to Miss Margaretta Campbell, of New Hampton, Iowa. The Dr. and Mrs. Lewis are now at home to their friends at Alden, Iowa. THE CORPUSCLE heartily joins the host of friends that the doctor has in the college, in wishing them a happy and prosperous married career.

'95—"Am becoming more and more convinced that Minnesota is one of the best states in which to practice medicine, and would be pleased to see more Rush men enter the state. The general impression that the examinations held by the State Examining Board are severe and partial ought not to prevent any average Rush man from taking said examinations. They are much easier than many given to you on the benches, and the partiality claimed for students of the State University can exist no longer since the course at Rush has not only been lengthened to 24 months but increased to 32 months.

The State Board of Minnesota are among the foremost in their endeavors to elevate the standard of the medical profession; after 1899 they will require that candidates for examination shall have attended four full courses at a medical college recognized by the State Board of Medical Examiners.

The enactment creating above referred to Board went into effect in 1887 and contained an "exempt clause" by which a few who had previously doctored many horses but few of the human kind, and other varieties of quacks were permitted with the regular and worthy practitioners to continue the practice without examination, but they are gradually dying off or are the victims of the law, "survival of the fittest."

Have been informed that Minnesota has one physician for

every 1200 population, which is quite a contrast compared with Illinois and some of the other states.

I know of several good locations that I would be pleased to see filled by Rush men, and will gladly give any possible information to those considering the question of locations.

State exams. are held the first Tuesday of Jan. April, June and Oct.

F. G. Sparling '95, is located at Wood Lake 40 miles distant and is enjoying a good practice.

Give my best regards to the boys and other people of mutual acquaintance and good repute.

Congratulations for THE CORPUSCLE, its gradual improvement predicts for it a most glorious future and an ever present source of interest. Here is to the School of the West, Rush of course, and with "the compliments of the season now upon us." I remain sincerely yours,

W. D. CALVIN.

The following letter from Dr. Elder will be read with interest by all the readers of THE CORPUSCLE, and they will learn with deep regret that death has again robbed our association of one of its best members. We shall be glad to carry out Dr. Elder's suggestion in regard to announcing events of especial interest to the alumni, in so far as possible. We would say however, that events of "especial interest" to all medical men are daily occurring at the college. The clinics, always replete with interesting cases, take place every afternoon from 2 to 4, and Monday, Wednesday and Thursday mornings from 10 to 12. The surgical clinics are held Tuesday and Thursday afternoons (Prof. Senn) and Saturday afternoon (Prof. Hamilton.) The laboratories are always open and class work in one or more of them going on almost continuously from 8 a. m. to 6 p. m.

AURORA; ILL., Dec. 23, '95.

Dr. J. M. Dodson.

DEAR DOCTOR:—I received the enclosed clipping this morning. I was not acquainted with Dr. Trimmer, but seeing that he was a graduate of Rush I thought it might be of use to you in the Alumni Department of THE CORPUSCLE.

I have thought for some time of writing you in regard to giving a *forecast* in THE CORPUSCLE, of events of interest that were to transpire at the college in the immediate future. I think it would give added interest to alumni in the vicinity of Chicago, and they could time their visits or make special visits so as to take in the events.

Having been a member of the same class I read Dr. Dodge's communication in the last issue with great interest.

I am glad to know of the continued success of Rush. I am glad to know that Prof. Holmes is still on deck and that Profs. Miller and Ingals still take a lively interest in all that pertains to her welfare. These connecting links with her past glory will be all too soon severed. Yours fraternally,

THOMAS A. ELDER, '68.

From a Lisburn paper.

DEATH OF DR. TRIMMER.

In the early hours of the morning death invaded the quiet community at Lisburn yesterday and despoiled it of one of its most honored citizens. Dr. J. W. Trimmer was the victim. His loss is one that is common to all in that section. He was known to all the people of the lower end of Cumberland county and was especially endeared to the residents of Lisburn, where nearly all of his life as a man was spent. Death was the result of his own exertions to benefit those around him. During the blizzard of last winter he used both shovel and ax to reach those who needed attention, and it was then he contracted the disease that wrecked his massive frame and gradually caused his demise, though he received the attention of the best physicians in the state. Deceased was 44 years of age and died on his birthday. He attended Millersville Normal, Dickenson seminary, graduated at Rush Medical college in 1875, and from Bellevue hospital, New York, in 1876. in which year he located at Lisburn. His wife died some years ago and Bruce, an only son, survives. Mr. Trimmer was a man of admirable qualities. His integrity, his ability and his faithfulness to his patients stamped him as a model man. In all his business relations there is nothing but that is deserving of praise. In his social relations likewise he was esteemed and appreciated at his true worth as a man and a neighbor. He had many friends because he merited friendship. His place will be hard to fill. The funeral takes place tomorrow afternoon from his late residence at Lisburn.

The following graduates of Rush Medical College were in attendance upon the annual meeting of the surgeons of the C. M. & St. P. Ry., held at the Great Northern Hotel, Chicago, Dec. 5th and 6th. Drs. S. R. Hewett, class of '67, Charles City, Iowa; O. W. Phelps, '73, of Mystic, Iowa; A. H.

Morse, '78, Babcock, Wis.; T. C. Clark, '81, of Stillwater, Minn.; Hugh Jenkins, '81, Preston, Iowa; A. Cory, '83, Wisconsin; R. S. Bacon, '85, Montevideo, Minn.; Chas. A. Armstrong, '87, Boscobel, Wis.; Geo. D. Beech, '91, Champion, Mich.; W. S. Sarles, '82, Sparta, Wis.; A. I. Bouffler, '87, Chicago, Sec'y of the association; C. D. Wescott, '83, Chicago; E. H. Bayley, '93, Lake City, Minn.; W. L. Duffie, '73, Guttenberg, Iowa.

HAWTHORNE, NEVADA, Nov. 18, 1895. To the Dean of Rush Medical College, Chicago, Ill., Dear Sir:—Can you give me any information regarding the location of Dr. Adair and Dr. Chesbrough who graduated from Rush College in the class of 1865. I would like to obtain their addresses if living. I was a first course student with them and would be very grateful if you can give me any news of them.

Very respectfully,

C. B. BRIERLY, M. D.

W. H. M. Philip M. D., '81, of Hope, N. D., is in the city for two months to take a course of post graduate instruction.

'70—Dr. A. R. Law is located at Madison, Wis.

'78—Dr. A. H. Morse is the health officer of the city of Pittsville, and the town of Remington, Wisconsin.

'81—"I cannot do without THE CORPUSCLE."

H. CLARK, M. D., Stillwater, Minn.

'88—Dr. R. A. Goodner, is the 2d Ass't physician at the Illinois Southern Hospital for the Insane, at Anna, Ill.

'91—Dr. G. D. Beech, who was interne at the Presbyterian Hospital in '91-2, is at present in charge of the Champion Iron Company's Hospital at Champion, Mich.

'93—Dr. E. H. Bayley, Lake City, Minn., a member of the Cook Co. quiz class in 92-3, says—"I am pleased to note the great improvements in Rush during the last two years."

'94—"I have not lost a particle of my affection for "Old Rush," and am interested in all that pertains to her welfare."

DR. GEO. A. TRUEMAN, Newberry, Mich.

'94—"I am located in a town of about 300 inhabitants. Have been here eight months and now have a good business. I furnish drugs to my patients—a plan which works well and pleases the laity. I am pleased with the work. Best wishes to the faculty and the boys at Rush."

C. H. ELKINTON, M. D., Eleva, Wis.

'94—We regret exceedingly to learn of the serious illness

of Dr. B. A. Clark, of Oshkosh, Wis.—a septic infection from a wound incurred in making a post-mortem examination at the Northern Wisconsin Hospital for the Insane. We are glad to record that at last accounts he was improving and was considered out of danger.

ONALASKA, WIS., Jan. 2, 1896.

DEAR MR. HONNOLD:—I enclose a newspaper clipping which no doubt will be of interest to the profession at large and especially to the class of "94" of which I have the honor to be a member.

Most sincerely,

FRANK R. WESTON, M. D.

BORN WRONG-SIDE TO.

La Crosse Daily Press, Dec. 30.

John Martel, a young man of twenty years, residing on French Island, was built wrong-side to! That is, the organs that belong on the left side are on the right and vice versa; so when John "goes awooing" and prepares to declare his affections, he will of needs place his left hand over his right breast, for that is where his heart beats.

So rare and astounding a freak of nature is hard of credence, and there are in fact, few known cases in the world's history; but the truth of the above statements were established beyond doubt by an examination made today by Dr. Frank Weston of Onalaska, to which also belongs the pleasure of "bringing out" Mr. Martel; he examined the young man some days ago and was astonished at the unexpected development. Dr. Weston's diagnosis has been completely confirmed by other physicians.

The doctors find that Martel's heart occupies the same position on the right side that it should, had he been normally constructed, occupied on the left side; that the apex is turned to the right instead of the left and that the right ventricle is in the front where it should be at the back; the pulsation, too, is under the right nipple. The transposition continues through the several parts and the aorta, the great blood conduit, extends from the right to left sides.

Martel says he had known from childhood that his heart beat on the right side and had often told his family of it, only to be laughed at for his pains; he did not, of course, know that his heart was located where the beats were and he was still less prepared for the information that it is constructed wrong-side to throughout, but it is nevertheless a fact. However, he

is healthy and robust and bids fair to live as long as most people.

The recent appointment of Dr. Brower to the State Board of Health is an announcement of interest to Rush men all of whom will join in congratulating the doctor on his preferment.

ANOTHER CASE OF POST MATURE LABOR.

DEAR DOCTOR:—

The following case will probably be of interest to the readers and especially Dr. Stahl who reported a similar one in the November number of *THE CORPUSCLE*.

I am referring to missed or post-mature labor. The case I am about to report is one which has been under my constant observation since the day of conception and the facts stated herein are absolutely reliable as the patient is my own wife. One thing I regret and that is that I had not read Dr. Stahl's article until I had had an experience of my own, or I should have taken measurements of the child. I only obtained the weight of the child and that is in excess of the one reported by Dr. Stahl.

My wife is twenty-two years of age, this was her first child, her height is five feet four and one-half inches, weight one hundred and seventy-five pounds. She has always enjoyed the best of health, is normal in every way except an abundance of adipose tissue. Pelvic diameters normal.

Her last menstruation ceased the first day of March, '95 and knowing how tedious it is for women to await parturition I set the day at about the 5th day of December to make it late enough.

Morning vomiting began the latter part of March. Her gestation was apparently normal until the time when labor ought to have occurred. She continued in excellent health until December, when she became worried and nervous and insisted there was something not right. Her abdomen was exceedingly large and hard and she suffered more inconvenience than women generally do at this time. The early part of December (I have not the exact date) labor pains began and continued for several hours but gradually subsided. The foetal heart and placental murmur were plainly audible during the month until Thursday, December 26th, when I failed to hear them. Thinking I might be mistaken I examined again the following day and Saturday, December 29th, but again found

all signs of life absent. I concluded to induce labor and gave a dram of fluid extract of ergot which promptly brought about uterine contractions. Hard pains continued every five minutes from Saturday afternoon until Monday evening, when at last there was sufficient cervical dilatation to allow of the application of forceps. The membranes were ruptured. Only a few ounces of amniotic fluid escaped, darker in color than normal. The patient was put under complete anesthesia. I found a R. O. A. position and applied forceps (high operation.) The delivery of the head was very difficult. It required all my strength to accomplish the same. When I saw the great size of the child I at once sent for my colleague, Dr. W. H. Doolittle, Rush '76, but before he arrived I had delivered the enormous shoulders and body. Considerable laceration was produced. This was repaired the next morning. The secundines had to be removed as there was considerable hemorrhage. The placenta was somewhat adherent and very fragile but was finally removed completely and intact.

Our patient has been doing well since. There have been no untoward symptoms of any kind, and primary union of the lacerated surface has occurred. The child was somewhat lacerated and the cuticle was missing in places. It was a male child weighing fifteen pounds four ounces and an approximate idea of its size may be had by stating that an infant's cotton dress usually worn from two to four months would scarcely meet around the body. The features of the child were those of one much older. Since locating here in May '94 I have attended forty-two obstetrical cases and it is certainly unfortunate that the first still born child should be my own. Was this case one of post-mature labor? Some will argue that conception did not take place until late in March, just before menstruation should have occurred again. In that case would we have had morning sickness regularly each morning the latter part of March? Would the child have attained its great size and mature appearance in nine calendar months? In my opinion the duration of this pregnancy was in the neighborhood of three hundred days.

E. WINDMUELLER, '94.

Woodstock, Ill., Jan. 6th, 1896.

FOR SALE.

A drug store in country town of 7000, near Chicago. Invoices \$3250, will take \$3000, $\frac{1}{2}$ cash and balance to suit. This is a grand chance for a Ph. G. M. D. Address X, T. 3., care CORPUSCLE.

BOOK REVIEWS.

A PRACTICAL TREATISE ON SURGERY With Special Reference to Treatment, By C. W. MANSELL MOULLIN, A. M., M. D. OXON., Fellow of the Royal College of Surgeons; Surgeon and Lecturer on Physiology to the London Hospital; formerly Radcliffe Traveling Fellow and Fellow of Pembroke College, Oxford, England. Third American Edition, Revised and Enlarged, Edited by John B. Hamilton, M. D., LL. D., Professor of the Principles of Surgery and Clinical Surgery, Rush Medical College, Chicago; Professor of Surgery, Chicago Polyclinic; Surgeon, formerly Supervising Surgeon-General, U. S. Marine Hospital Service; Surgeon to Presbyterian Hospital; Consulting Surgeon to St. Joseph's Hospital and Central Free Dispensary, Chicago; Secretary-General of the Ninth International Medical Congress, etc. 623 Illustrations, over 200 of which are original with this work, and many of which are printed in several colors. Royal 8vo. 1250 Pages. Cloth, \$6.00; Leather, Raised Bands, \$7.00. Philadelphia. P. Blakiston, Son & Co.

The following is an outline of the contents of this well known text book.

Part I—General pathology of surgical diseases. Injury and repair, diseases due to non-infective organisms, diseases due to infective organisms, tumors.

Part II—General pathology of injuries. The general effects of injury, the local effects of injury, minor surgery and anaesthetics.

Part III—Diseases and injuries of special structures. Diseases of the skin, injuries and diseases of blood-vessels, injuries and diseases of lymphatics, injuries and diseases of nerves, injuries and diseases of muscles, tendons, etc, injuries and diseases of bones and joints, injuries and diseases of the head, injuries and diseases of the back, injuries and diseases of the eye, injuries and diseases of the face and nose, injuries and diseases of the mouth and jaws, injuries and diseases of the tongue, salivary glands and tonsils, diseases of the ear and larynx, injuries and diseases of the neck and throat, diseases of the thyroid, injuries and diseases of the pharynx and oesophagus, injuries and diseases of the chest, injuries and diseases of the abdomen, injuries and diseases of the rectum, injuries and diseases of the kidney, injuries and diseases of the bladder, diseases of the prostate, injuries and diseases of the urethra, injuries and diseases of the male organs, diseases of

the female generative organs, diseases of the breast, amputations, military surgery, transportation, etc., index.

The article on diseases of the female generative organs was written by the author's brother, J. A. Mansell Moullin, M. R. C. P. London, M. R. C. S. England, Vice-President British Gynæcological Society, Physician to Hospital for Diseases of Women, Soho Square, etc,

The chapters on diseases of the skin and eye, by Jonathan Hutchinson, Jr., F. R. C. S, England, Assistant Surgeon and Surgical Registrar, London Hospital, late clinical Assistant Royal London Ophthalmic Hospital, etc.

The sections on diseases of the ear and larynx were contributed by T. Mark Hovell, F. R. C. S. Edinburgh, M. R. C. S. England, Surgeon and Aural Surgeon Hospital for Diseases of the throat, Golden Square, Aural Surgeon London Hospital, etc.

The section on tumors, by Frederick S. Eve, F. R. C. S. England, Pathological Curator to the Museum, Royal College Surgeons, Out-Patient Surgeon Evelina Hospital, late House Surgeon St. Bartholomew Hospital.

Article on military surgery, transportation of wounded, etc., by the editor, John B. Hamilton, M. D., L.L.D., Prof. Surgery Rush Medical College.

This book, while the work of the above named distinguished English authors, has been carefully edited by Professor Hamilton, who has exercised the editorial prerogative with much freedom, and with advantage to the book so far as its adaptation to American needs are concerned. All those portions of the original work, which related to diseases of the skin, eye, ear and larynx, have been stripped of everything except the strictly surgical diseases and injuries, this gave room for the addition of much new matter in the pathologic section, an entirely new chapter on military surgery, and for the introduction of many new illustrations, some original and some from other works. The work bears the marks of the editor's hand from title page to finish, and that it has met with appreciation by the profession is evident from the fact that the third edition was demanded within a year after the appearance of the first. Rush students of '95 and '96 will recognize the illustration of the unique cases of mammary hypertrophy on page 1182 and the actual specimen now in the college museum will have a renewed interest. Prof. Hamilton has taken pains everywhere to incorporate the views and opinions of his distinguished colleague, Professor Senn, wherever applicable throughout the book. There are few if any books on the market that approach this edition of Moullin in clearness of expression and freedom from redundancy and from a literary standpoint it has few superiors. The chief merit of the new Moullin is its adaptation to the practical needs of the student

and the practitioner. As a book of reference it will be found as full as the limitations of space permit. It is not intended to be encyclopædic, but there are few topics in every day surgery that are omitted.

A MANUAL OF SYPHILIS AND THE VENEREAL DISEASES—BY JAMES NEVINS HYDE, A. M., M. D., Professor of Skin and Venereal Diseases, Rush Medical College; Dermatologist to the Presbyterian, Michael Reese and Augustana Hospitals; and Consulting Physician for Skin and Venereal Diseases St. Elizabeth Hospital, Chicago. With 44 Illustrations in the Text and 8 Full-Page Plates in Colors and Tints, 618 pages. Price, \$2.50 net. Published by W. B. Saunders, Philadelphia.

The authors have held to their purpose in supplying all practical facts connected with the study of syphilis and the venereal diseases. The book is published to meet the special needs of the student and practitioner, rather than the expert. It gives very practical instruction upon the subject, and is written in the clear forceful style that characterizes all of the productions of Dr. Hyde. We are glad to recommend it as worthy of a place in every medical library.

PRACTICAL URANALYSIS AND URINARY DIAGNOSIS: A Manual for the Use of Physicians, Surgeons, and Students. BY CHARLES W. PURDY, M. D., Queen's University; Fellow of the Royal College of Physicians and Surgeons, Kingston; Professor of Urology and Urinary Diagnosis at the Chicago Post-Graduate Medical School. Author of "Bright's Disease and Allied Affections of the Kidneys," also of "Diabetes; Its Causes, Symptoms, and Treatment." Second, Revised, Edition. With Numerous Illustrations, including Photo-Engravings and Colored Plates. In one Crown Octavo volume, 360 pages, in Extra Cloth, \$2.50 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street. Chicago Office, Lakeside Bldg.

It is a great satisfaction to secure such a book as this one. It has many things to praise and very few to criticise. Thoroughly scientific, it shows evidence on every page of careful work and study. Although designed as a laboratory guide, it is thoroughly clinical, which makes it of still greater value. The arrangement of the work is both logical and practical. Among the things of especial interest and merit, are the authors "percentage tubes" for the quantitative estimation of the chief urinary factors and also his method of determining the percentage of sugar in the urine. The section on "Urinary Diagnosis" is a collection of "diagnostic data derivable from the urine" and as a feature adds much to the value of the book. The colored plates illustrating the various crystalline deposits are accurate and the general mechanical tone of the production is above reproach.

This is a work which Professor Haines has favored with very high praise, and to a Rush graduate or student of the later days, knowledge of this fact, is ample evidence of its merit.



FRED C. HONNOLD.

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RUSH MEDICAL COLLEGE, CHICAGO, ILL.
MEDICAL DEPARTMENT LAKE FOREST UNIVERSITY.

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EDITORIAL COMMITTEE.

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RUBY RED AND BLACK: Colors of Lake Forest University. ORANGE: Color of Rush Medical College.

With this issue of the CORPUSCLE, the new board assumes control. It is with a keen appreciation of the great responsibility placed upon it, that the present administration enters upon its duties. However, trusting in the generosity of its readers and liberality of its contributors, the board of the class of '97 will do all in its power to maintain the standard set by its predecessors.

At the last regular meeting of the '96 board, Messrs. Honnold, '96, and Eckard '96, retiring, Messrs. Crowder, '97, and McEwen, '97, were elected to fill the vacancies. J. E. Luckey, '97 was elected secretary and treasurer and E. D. Whiting '97, president.

This month we publish the likeness of our retiring editor-in-chief, Mr. F. C. Honnold, '96. In the retirement of Mr. Honnold the board loses a most valuable member, one whose place will be exceedingly difficult to fill. Since his accession

to the board Mr. Honnold has shown himself to be a sound thinker, a hard worker, a prolific writer and one in whose mind the interests of the CORPUSCLE are ever uppermost. The great interest which he has shown in the welfare of the paper and the vast amount of labor which he has given to it have been great factors in bringing about the present condition of the paper.

We are pleased to announce that Mr. Honnold will remain as business manager and we shall often seek his advice in questions of doubt and perplexity which may arise.

As Mr. Honnold graduates from Rush and passes out into the world to make his stand against those obstacles which we all must meet, we wish him joy and success. We predict triumph for him, as we feel confident that those qualities which have brought him success in his student days will grow with the man and bring victory in the sterner battles of life.

At this time of the year a few words of caution to the over zealous student will be very *a propos*. The tendency of every one is to remain too much within doors. At present our Chicago climate is anything but inviting; over head all is smoke and dark clouds; underfoot is mud, slush and snow, while the whole atmosphere is impregnated with soot and dampness. There can be no doubt but that these are the best of "study days." A warm, cozy room, even with the lights lit at noon, is more inviting than the cold and damp streets. Nevertheless, the student should not forget that there is good oxygen in the air in spite of the disagreeable environment and that exercise is absolutely necessary to good work. When the weather is too disagreeable for outdoor exercise the West Side Y. M. C. A. gymnasium is at the disposal of all medical students.

The sick list among our classmates is at present alarmingly large. Let medical students be more careful in regard to hours of sleep and exercise and there will be less sickness in their midst.

When is it best to enter on the study of medicine? This is of more than passing interest. With properly high require-

ments for admission to our medical colleges the question will come to be more satisfactorily answered than at present. But even then the matter will be open to consideration.

To no man as to the physician is the weakness of human nature so apparent. His knowledge reads secrets unknown to the most intimate associates and how often do these secrets shake to its very foundation faith in humanity. Without the power to discern the beautiful and true and noble, away down below the rubbish of the imperfections of human nature, one is in a sad state that will eventually lead to an indifference that will destroy true happiness and create a pessimistic, crabbed old doctor instead of the even tempered, lovable man that should govern the sick-room.

It is impossible to set an age in years at which the study should be entered upon, for age, so stated, is but an arbitrary term—some at twenty are as old in knowledge and judgment as others at forty. It may be said that no person should begin the study of medicine proper until he has developed a mature and strong character that will not be swayed by the startling revelations of medical science.

The medical, and in fact the whole scientific world is at present greatly interested in the recent discoveries in photography made by Professor Roentgen, of the University of Bavaria. Rumors of wonderful, almost supernatural accomplishments, achieved by this man, have been reported. In a late number of the *Times-Herald* an interesting and concise synopsis of the work of Roentgen is given. The article goes on to say that by the Roentgen discovery pictures may be taken of the interior of solid substances. The skull of a man, the bones of his feet and hands, in fact, his entire skeleton may be photographed by the Roentgen process, showing how one would look with the flesh off his bones. Flaws and inequalities in the heart of minerals may be detected, it is claimed, by this remarkable process of photography, and still the discovery is in its infancy, with greater possibilities before it. Professor Rontgen recently sent to Professor Schuster, of Owens College, Manchester, England, a photograph taken by

the new process. The picture shows a complete reproduction of a compass needle with the divisions into degrees of the circle over which the needle is placed. The needle before being photographed, was placed inside a metal box. As flesh, skin and cartilage are more transparent than bone, the photograph of a hand gives a perfect outline of the bones of the hand and fingers, the outline of the flesh being but faintly discernible. In an article contributed to the British Medical Journal by Professor Schuster the writer says, in speaking of Professor Roentgen's discovery, that the photographs obtained are in the nature of shadows, and their great sharpness is itself testimony that the new radiation must be propagated in straight lines. The radiation passes in straight lines easily through paper, cardboard or wood, and produces photographic effects after having passed through two complete packs of playing cards. The photographs may be taken in the ordinary light of day if the plate is kept in its dark slide, which will completely cut off all ordinary rays and yet transmit the new radiation.

A few weeks ago Dr. Bevan was heard to urge the students to spend as many Sunday afternoons as possible at the Art Institute, "for," he said, "a taste for good painting, and good sculpture and good architecture helps in the comprehension of anatomy, and the best doctor must know more than medicine." This statement embraces a broader truth than is at first apparent. A most fundamental mistake is failing to recognize the breadth of our human nature, and the man who does not heed the development of all the capacities he finds within himself—social, moral and æsthetic, as well as intellectual—fails in the completeness of his education. More than any other professional man, perhaps, physicians fail in the imaginative grasp of their business. The tendencies of the profession are at least toward that materialistic and practical state that rules out to a great extent the perception of the higher and finer truths and the attainment of a general culture. There are so many facts to be learned and remembered, so much empirical knowledge to be gained, and so much empiricism in the

manner of getting it, that the student is only too liable to become narrow in his method of viewing things. The medical sciences embrace a great field for investigation and deep thinking; but just like any other single branch of thought, taken alone even they, with all their breadth, are yet comparatively narrow. It is only when considered in relation to other things and to a general system of thinking that they are the greatest. Hence the necessity of the physician's reaching out into other fields. It is not scholarly to read science and not philosophy, or to study the physical and not the ethical, the emotional, and the intellectual man. Physiology without the principles of psychological theory is but half complete. The doctor must read variously, think variously and in various directions. he must have many interests if he hopes to make the most of himself. We refuse to listen to the preacher who knows nothing but theology; why not to the doctor who knows nothing but medicine. Just now the two great departments of thought, science and theology, are in antagonism. They stand opposed and call for reconciliation. The man of science must know his ground and to do this well requires more than one point of view. Everything is of course subordinate and should be made subservient to the medical student's main purpose, namely, that of becoming a competent physician; but many things beside text-books on pathology are conducive to this end. He may get no diagnostic points from reading Shakespeare, but he cannot study the human nature there revealed without getting a conception of man helpful in his practice. Shakespeare is the best teacher of breadth, and the physician who reads him is on the whole the safest with whom to place your case—if it be a grave one—for it indicates that he covers more space in the world of thought. Professional learning is certainly the important thing but it becomes more quickly and pliantly applicable when supplemented by the broader learning that makes it see from many sides. Anything that broadens the scope of a man's possible activity of thought makes more patent that which he brings to bear upon any single thing. The more complete the acquaintance with the various phases of life the more perfectly can relations be established in any

one of them. Hence the necessity of studying the work of the artist, the philosopher, the novelist. They all reflect life in some form and it takes them all to make life perfect. Hence the significance of the statement made by Dr. Bevan. We desire only to extend its application and to urge that it be thought of. Strive to comprehend rather than to know. Strive to grasp the subject of medicine not only in its inter-relations but also in its relations to other things. The ideal as well as the real has a place in the realm of the medical sciences.

PULSE OF '96.

At a meeting of the class of '97, held January 17, the Board elected last year to publish the *Pulse* of '96 handed in their resignation. It seems that the publishers of last year's *Pulse* were financially wrecked and the obstacles in the way of a successful issue this year appeared insurmountable. We are sorry that it has become necessary to drop this publication. Such a book is a very desirable souvenir of college life and it would seem that its publication ought to meet with the most hearty support of every loyal Rush student. In view of the fact that failure stared them in the face, we think the Board for '96, acted wisely in resigning but we sincerely hope that the hearty and substantial support of both faculty and students will in the future render such a step unwarrantable.

THE PHYSICAL BASIS OF LIFE.

BY PRESIDENT JOHN M. COULTER, Ph. D., of Lake Forest University.

(A series of lectures delivered before the classes in physiology of Rush Medical College.)

LECTURE I—PROTOPLASM.

(We are sorry not to be able to print in full the interesting talk given by President Coulter on this subject in the upper amphitheatre of the college Friday evening Jan. 17. It will not however be necessary to an understanding of what is contained in the succeeding lectures. In it he considered the history and growth of our knowledge of the substance protoplasm and dwelt at some length upon its physical, chemical and biological properties. The reactions of protoplasm to moisture, light, heat, electricity and temperature were briefly cited, and attention was called to the exceeding chemical complexity of the compound or compounds which compose it. So far as our knowledge goes at the present time protoplasm is the essential element of all living substance and is in all cells, of whatever kind, practically the same in composition. It may be free as in the amoeba, or surrounded by thick and dense cell walls as in most vegetable cells. The cells may be single or aggregated but the living substance is always protoplasm.)

LECTURE II.—THE CELL.

(Delivered Friday, Jan. 24. Reported by C. C. Cummings, '97.)

The last lecture dealt with the living substance, protoplasm. This living substance in almost all animals and plants is distributed in small portions and these are really the units of structure, known as "protoplasts." Some call them "energids," indicating that they are centers of energy. Our conception, therefore of a living body, is that it is made up of a great many protoplasts, or individual protoplasmic bodies. Each protoplast has constructed about itself a wall and to this structure, that is, protoplast and wall, has been ordinarily applied the term "cell." You can see, however, that the wall is but the result of the activity of the protoplast. Tonight I wish to take up this unit structure which has been called a cell and discuss briefly with you certain problems that arise from its

peculiar powers. For convenience, we will divide the subject into two parts. 1, Cell organs, and 2, cell formation.

I. CELL ORGANS.

The older biologists, when they first discovered the cell with its contents had a very hazy notion as to its nature. You may have inferred from what was said in the last lecture that the cell is filled with protoplasm in rather an indifferent way. The fact is we have found that the protoplast is highly organized, that it is not a homogenous body; but that it is differential into quite a number of organs to each of which belongs a special function. I wish to speak of but two or three of these organs, those which are concerned in the problems before us.

In every active cell there is a background of protoplasm which may be called undifferentiated, the general mass of granular protoplasm, and to it is given the name "cytoplasm." The portion of the cytoplasm next to the cell wall is closely applied and hyaline.

The most prominent organ to be found in the cell is the "nucleus" imbedded in the cytoplasm. This organ found within every living cell is protoplasmic, but differs from cytoplasm. It has a characteristic chemical constitution as well as peculiar physical properties. The substance of the nucleus is referred to as the nucleoplasm, as opposed to cytoplasm which is regarded as ordinary undifferentiated protoplasm. Not so long ago it was thought that the last has been said with reference to the cell, when the general cytoplasm with the membrane enclosing it were discovered. Besides the nucleus another very important cell organ has been recently discovered. Two small bodies may be seen lying closely in contact with the nucleus. These bodies seem to be the center of radiating lines which run in every direction and gradually pass into the system of fibrils, connected with the cytoplasm. These, when first discovered, were named "asters" on account of their radiating or star-like appearance. They are still most frequently referred to under that name by zoologists. Botanists however usually speak of them as "centrospheres." They are sometimes spoken of as "directive spheres." There are other distinct cell organs which I shall not stop to describe, as they bear no direct relation to the problems in hand.

I have spoken briefly of the cytoplasm; its ordinary fibrillar character was mentioned in the last lecture. Of the structure of the centrosphere but little is known. Within its spherical body looking like a nucleus of its own, there occurs an

opaque body known as the "centrosome". It only remains to speak of a certain structure in the nucleus which seems to bear particular relation to the problem of heredity. The nucleus is a highly organized organ, by no means a homogenous mass. By the use of proper reagents what is known as the chromatin thread or filament may be found within the nucleus. It usually looks like an irregularly coiled filament, and as it is the nuclear substance which takes the stain, is spoken of as chromatin. I wish to correct a current opinion with reference to the origin of these organs. It is that they frequently disintegrate and disappear, in other words, return to the condition of undifferentiated cytoplasm, from which also they may reappear. There could be nothing more erroneous. It is just as possible for a cell to exist that has not come from some previously existing cell as it is for a centrosphere or nucleus to exist that has not come from some previously existing centrosphere or nucleus. These organs are handed down from cell generation to cell generation and there is none of that disappearance so often spoken of.

II. CELL-FORMATION.

The two phases of cell activity to which I wish to refer are those of cell-division and cell-union. We observe with reference to such cells as have the power of self division, that they can divide themselves and that each half will then grow into the size and structure of the original cell. It is evident that cell-division lies at the basis of what we call growth; that organs grow by virtue of the power cells have to divide themselves. We have also observed that certain cells have the power of uniting. Two of these cells will come together and form one new one. We will then consider cell-devices as a phase of growth; and cell-union, as it ordinarily occurs as sex-reproduction. I qualify reproduction by calling it sex reproduction, as there are other methods of reproduction.

1. *Cell Division*.—Suppose a cell such as the normal one described, ready to begin the work of self-division. In the stage described the nucleus is in what is known as the *resting condition*. The first thing to indicate that the cell is about to divide, is a movement of the centrospheres. When originally formed they are of course near each other, as they have been formed by self division. The motion of the centrospheres results in determining the plane of division. The two centrospheres come to rest at opposite poles of the nucleus and the plane of division will be at right angles to the axis joining the two centrospheres. It is for this reason that these organs are

known as *directive spheres*. They seem to have a certain kind of directive influence over all the changes to take place in cell division. The next thing to be observed is that fine threads connect the two centrospheres, arranging themselves like meridian lines about a globe, the centrospheres occupying the poles and a distinct equatorial region being developed.

These meridian threads are very delicate, but distinctly brought out by staining reagents. The structure thus formed is known as the "nuclear spindle." While this spindle is forming, changes are taking place in the chromatin filament. In passing, I may say that cell-division is not a matter of the nucleus alone, but centrospheres and cytoplasm as well are concerned in the operation. You will find that the chromatin filament, which seems continuous, is really a chain of fragments. The first change is for the filaments to break up into its constituent links. We do not know whether they are organically united or not. They are certainly kept physiologically distinct. Different kinds of plants and animals have different numbers of these units in the chromatin filament. Some have but two, others four, others eight, and so on to numbers very difficult to count. We had better take a very simple case, and suppose that our chromatin chain breaks up into four unit links. These fragments, when separated, move to the surface and collect in the equatorial region of the spindle.

These constituent parts of the chromatin filament are known as the "chromosomes." When these chromosomes appear at the surface of the nuclear mass in the equatorial region, all are more or less sharply curved. It seems to make no difference as to the direction of the curve with reference to the poles. The next change is a very important one, as it enters prominently into our theories of heredity. While in the equatorial position, each chromosome is longitudinally divided from end to end. It can be discovered, by a little care, that this chromosome body itself is made up of little disks, it is in fact a row of disks in contact with each other. This disk is perhaps the first object in science that ever received a name that may be said to be short. This unit of the chromosome has received from Weismann the name of "id." In the longitudinal divisions, therefore, each individual "id" has been accurately bisected. When the division has taken place, the number of chromosomes seems to have been doubled. Then a new movement begins. One half of each original chromosome moves along the meridian lines of the spindle to one pole, while the other halves move toward the opposite pole, so that each

original chromosome has a half representing it at each pole. When the chromosomes have completed this motion, and arranged themselves at the poles, they form an umbrella-shaped mass capping the nucleus at each pole. The spindle threads persist and become thickened in the equatorial plane. These thickened masses are in contact, so that the result is a plate, the first thin plate dividing the original cell into two new cells. At the same time the chromosomes at each pole begin to coalesce, and a chromatin filament is formed, such as occurred in the original nucleus in its resting stage. In other words, we find a new nucleus in each of the two new cells. All of these movements, at least seem to be under the direction of the centrospheres. The whole process is known as "nuclear division," or "karyokinesis."

It is very commonly said that the whole body is but an aggregation of such cells. This seems to be a short-sighted statement, and leaves out of view the large difficulty in the way. It seems perfectly evident that all division, resulting in the two halves as described, is a very careful division of the material of the chromosomes. The "ids" are thought to be, with great probability, the carriers of what we call hereditary tendencies. We see, therefore, that these hereditary tendencies have been carefully divided between the two cells. It becomes evident, therefore, that such a process will result in cells absolutely like their predecessor. While this accounts for the way in which aggregates of similar cells may be built up, it does not account for things like this: How is it that cells of unlike structure come from a common origin? We know that the whole body originates from one cell, and that from this common origin the cells become differentiated. When and how in this process are the new tendencies separated, so that a cell will become fibrous, or differentiated into one of the many forms known to us? It does not explain how aggregates of dissimilar cells are organized into an organ; nor does it explain that larger organization which involves the outlining of the whole body. There is an organizing force in the background which has never yet been set forth.

2. *Cell Union*.—How is it that two cells unite with each other? All that is known can be told briefly, for it involves much that has been said already. The process most commonly results in what is styled "sex reproduction." We will take two high grade cells, that is, those from the bodies of high grade animals. One of the cells is large, on account of large development of cytoplasm, and is quiescent, but the nucleus

and centrospheres are such as have been described. The other cell is much modified, not in type, but in the amount of display of the various regions of the cell. For instance, it seems to be nearly all nucleus, with its centrospheres, but with comparatively little investing cytoplasm, which is frequently continued into more or less of a tail. This, of course, is a simplified cell, chiefly by the small amount of cytoplasm, and correlated with this simplicity is great activity. The small active (or male) cell begins to penetrate the cytoplasm of the large passive (or female) cell, and the tail-like process disappears. It is commonly stated that the two nuclei approach each other, but the approaching is chiefly on the part of the active cell. When the chromosomes of the two nuclei come in contact, a movement follows about the point of contact as a pivot which results in the nuclei lying side by side. Then follows a fusion of the nuclei, and presumably a fusion of the centrospheres, at least but one appears at each pole of the new nucleus.

The new centrospheres are now in a position to construct the nuclear spindle and the first segmentation follows. Suppose an animal whose cell nuclei contain two chromosomes. Will the egg cell start out with four? Will the generation which comes from that egg have four, the next eight, and so on? This indefinite increase in the number of chromosomes is provided for. The two sex-cells, before union, effect cell-division, giving off what are known as "polar bodies." This process reduces the chromosomes in the sex-cells to one-half the normal number for the organism; so that the process of union simply restores the normal number.

III. STATEMENTS CONCERNING HEREDITY.

I suppose you have often heard the statement that it is wonderful how a little speck of protoplasm has lodged within it such enormous power, and that of two specks of protoplasm, exactly alike, one may result in an oak tree, and the other in a man. Even on theoretical grounds, it ought to be perfectly evident that there must be a vast difference between those two specks of protoplasm.

I suppose what you have in mind as heredity might be loosely described in the general statement that "like begets like." We expect that an animal or plant will produce another like itself. It is generally held that the "ids" are material carriers of what may be styled hereditary tendencies. If this be true, in sex union two sets of "ids" are brought together, and each one of these sets is carrying hereditary tendencies that have been derived from long lines of ancestors. Two

streams of tendencies are then brought together, and the probabilities are that exactly the same combination does not occur twice. While plants and animals beget each its own kind, still the offspring is never exactly like the parent, nor probably exactly like any form that ever existed before. In each "id" there is supposed to be lodged a power which would direct certain results in the organism if free to express itself.

It seems to be impossible however, for every one to express itself and therefore there follow what may be called interferences. Some become dominant, others are neutralized, Now one set now another will be developed in the offspring. Now the offspring will resemble one parent, now the other, now both in varying degrees, and sometimes neither at any point. This suggests an explanation of "atavism," namely, a resemblance of the offspring not to either parent so much as to some previous ancestor. One of the consequences of this theory of heredity Weismann claims, is that what we call transmission of "acquired characters" is impossible. This would rather oppose the statement of Oliver Wendell Holmes, that if you wish to educate a man you must begin with his grandmother. If we define as an acquired character a character that has appeared in the lifetime of the individual as a result of some accident to the body or in the environment, Weismann says that it is a phenomenon which has no effect upon the hereditary carrying power of the ids. The well known cases heretofore cited we have ruled out as not resting upon sufficiently scientific testimony. This is a very important question in the great problem of heredity. It would seem to have a great deal to do with the possibility of transmitting to children certain things heretofore claimed to be transmissible. It is needless to say that this claim concerning the non-transmissibility of acquired character is strongly opposed, and it remains one of the great open problems. You may just as well as not have your eyes open to it. If you can ever get a well established case of the transmission of acquired character I can assure you it will be a valuable fact to be made known.

I sent a patient to St. Paul recently for operation, and while there, heard a story of an old war surgeon, who as a result of field practice, had become accustomed to advising: "Only one thing to do, cut it off." One day a patient with a rather badly disfigured head was brought into the hospital, the old surgeon, after examining the part, gave vent to his accustomed remark: "Only one thing to do, cut it off."

SIMPLE PREPARATIONS FOR ASEPTIC OPERATIONS.

BY A. J. OCHSNER, M. D.

But a few years ago students were taught to go through the most extensive and complicated preparations preliminary to every surgical operation. Many methods became most popular because they served to impress the laity with the superior qualifications of the surgeon employing them. Many complicated methods were introduced into practice simply to bring glory to their inventors.

In many vicinities it is scarcely yet safe to begin an operation in a private house without having employed a series of performances as rational as the "hokus pokus" of the faith-healers of old.

In case infection occurred after operations under these circumstances the report of the case in the medical journal would read about as follows: "Notwithstanding the fact that every precaution known to modern scientific surgery was employed in securing an absolutely aseptic condition of the operating room, the environments of the patient, etc., a violent peritonitis ensued, resulting in the fatal termination of this most interesting and instructive case." Usually this is ascribed to air-infection, auto-infection or catgut infection.

The report would have been much nearer the truth had it read as follows: "Everything in the room which could not possibly come in contact with the wound was carefully made aseptic, then the practitioner placed his hands, with which he had shortly before "puddled in pus," into the peritoneal cavity, having previously passed them through a bichloride of mercury solution, etc."

But fortunately for the patient times are changing and even the laity look for primary union and appreciate the surgeon whose wounds heal primarily.

In order to secure such results we must bear in mind that wounds suppurate because they are touched during the operation or dressing with dirty hands, instruments, sponges or other objects which have no right to be near the wound; or the incision is made through dirty skin; or the material used for sutures or ligatures is not aseptic.

Of course this presupposes that the operation is performed for a non-suppurative condition.

The suturing material is most commonly blamed for infection and most invariably wrongly. This is illustrated very beautifully in hospitals, where a number of surgeons use the same catgut. One surgeon with clean hands will never have catgut infection, his colleague with dirty hands will constantly have infection and will always blame the catgut.

It is so extremely easy to prepare reliable suturing material that it is well not to depend upon manufacturers for these supplies.

Silk, silk-worm-gut and horse-hair are enclosed in a few thicknesses of gauze, placed in a closed vessel—a tea-kettle or an ordinary tin-dinner-pail with a lid will do—this is placed on the stove with enough water to thoroughly cover the material and boiled for an hour. It is then preserved in a 5 per cent. solution of carbolic acid in water. It becomes brittle after it is a year old.

Catgut is prepared as follows: E violin strings and medium banjo strings are the most convenient sizes and can be obtained at any music store. They are immersed in strong sulphuric ether in a tightly corked bottle for one week; in strong alcohol containing 1 gr. of corrosive sublimate to the ounce for one week then it is preserved in strong alcohol indefinitely.

The alcohol should be changed once a month as it becomes weakened by absorbing moisture from the air, which diminishes its dehydrating and consequently its antiseptic power.

The following fluid is a little complicated but renders catgut somewhat less absorbable and hence more valuable, especially in gynecological operations:—Dissolve one ounce of iodoform in two ounces of strong sulphuric ether. Add seven ounces of absolute alcohol and preserve in a tightly corked bottle.

Any suturing material which has been taken from the preserving bottle and handled during an operation, it should be put through the original process of disinfection before it is used.

Instruments are most readily disinfected by boiling in a solution of bi-carbonate of soda, a tablespoon to the quart of water, for half an hour.

Knives should be made out of one piece of metal, so they can be disinfected by scrubbing thoroughly with strong alcohol.

Needles are very common carriers of infection. By heating them in an alcohol flame and then dropping them quickly

into strong alcohol they can be disinfected without having their temper spoiled.

The hands should be kept clean habitually. It is an extremely bad habit to "puddle in pus" perpetually.

Of course one cannot always avoid touching pus, but one can easily dress suppurating wounds, or open small abscesses without getting infectious matter upon the fingers.

The best means of making the hands aseptic is by the free use of soap, warm water and scrubbing brush, then washing with strong alcohol, in order to dissolve any fatty material which may still adhere to the skin, then cleansing the nails with a blunt pen-knife or nail cleaner, and then once more washing thoroughly with soap and warm water and scrubbing brush, in order to remove any loose material. The same method suffices for the preparation of the field of operation.

For the purpose of illustration, we will suppose that you are called to perform an operation for a strangulated hernia upon an exceedingly filthy patient in one of the dirtiest hovels in the country or in the city, with no one to assist you except a colleague who carries millions of microbes under his fingernails. How should you proceed to meet this emergency?

We have in our surgical bag the necessary instruments—a razor, scalpels, dissecting forceps, scissors, hæmostatic forceps, a pair of long handled sharp retractors, needles—these have been sterilized at home as described above and enclosed in a clean towel or canvas bag. We also carry a nail-brush, soap, a pint of strong alcohol, two ounces of flexible collodion, a 5-yard package of aseptic or antiseptic gauze and half a pound of absorbent cotton, also half a dozen clean towels wrapped up in a towel and this again in a piece of strong wrapping paper. We have the necessary suturing and ligature material prepared in the manner already described. All of these things can be carried in a moderate sized satchel.

Arriving at the house we place a tea-kettle full of water on the stove to boil, then we place the kitchen or dining-room table—usually there is but one—near a window, spread a quilt over this and place a pillow at one end. All of this is covered with an oil cloth, if one is at hand, and this with the cleanest sheet that can be obtained or with one of our towels in the vicinity of the operation.

We next scrub our hands in the manner described and treat the patient's abdomen and thighs in the same manner, carefully shaving the skin in the vicinity of the operation. For washing we use the water which has in the mean time been boiled.

A pad of absorbent cotton saturated with strong alcohol is placed over the area to be operated upon and left in place until the beginning of the operation in order to dissolve the fatty material contained in the upper layers of the epidermis.

Four plates are now found and thoroughly scrubbed with soap and hot water and then with strong alcohol. On one of these plates we place our instruments; on a second one, pieces of aseptic gauze to be used as sponges; on a third one ligatures and sutures already threaded and on the fourth one the dressings to be applied when the operation is completed. All of these preparations have occupied less than half an hour and still they are as perfect, so far as the welfare of the patient is concerned, as though the whole shanty had been turned upside down and every nook and corner had been disinfected.

The patient is now placed on the table and anæsthetized. The field of operation is once more scrubbed with water and then with alcohol and the field of operation surrounded with four of our clean towels.

You wash your hands once more with alcohol and with boiled water and ask your colleague to do the same.

From this time until the operation is completed and the wound dressed, you touch nothing but your sterilized instruments, sponges, sutures and ligatures and the wound. Should your colleague forget himself and touch any unsterilized substance he must scrub again.

The four plates with their aseptic contents have been carefully placed where no one can reach them except the operator.

Your colleague is on the opposite side of the table and can assist you very materially by keeping the wound open with the long handled retractors while you do everything else yourself. You are responsible for the wound and must see that no one else will infect it. At the same time you must not offend your colleague, because it will very materially enlarge your sphere of usefulness if you can gain both his good will and his admiration for your skill and care.

After closing the wound it is well to seal it by placing strips of gauze two inches wide over the incision and fastening down the edges by applying an abundance of flexible collodion. A large absorbent cotton dressing is applied over this and held in place with adhesive plaster and with a spica bandage in a manner which will prevent the patient and his friends from touching and thus infecting the wound.

Now the patient is ready to be returned to his filthy bed. Notwithstanding this and all the other undesirable conditions

you can feel certain that your wound will heal primarily and that the result of the operation will be perfectly satisfactory from the standpoint of aseptic surgery. The microbes in the bed or the ceiling or the floor have not been disturbed in the least, but you are certain that no dirty hands or instruments have come in contact with the wound and consequently your wound must be aseptic.

I have tested this method many times and it is as satisfactory as it is simple and can be applied to any other operation equally well.

Of course one would not choose such conditions but the results obtained notwithstanding these conditions demonstrates in a very practical and comprehensible way that wounds suppurate because they were touched with dirty hands, instruments, or sponges and not because the surroundings were unfavorable.

CELOSOMUS; VARIETY, SCHISTOSOME.

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Report of case with recovery.

Celosomic fetuses are described as "single monsters, characterized by a more or less complete eventration of the genito-urinary organs and various viscera." These "clefts" of the body are divided into six varieties, named according to the division of the trunk most involved; *aspalosomes*, *agenosomes*, *cyllosomes*, *schistosomes*, *pleurosomes* and *kelosomes*. (Saint Hilarie). The divisions involved are thorax extending from abdominal cleft, abdomen, and pelvis, and the eventration of viscera may be lateral or median.

Where the eventration involves the upper half of the trunk the thoracic limbs are absent or ill-developed; the lower half, the pelvic limbs are absent or deformed.

Schistosomes includes cases where there is lateral or median eventration throughout the entire extent of the abdomen, the pelvic limbs absent or deformed. The abdominal wall is replaced by a thin membrane through which the viscera may be seen. This variety in its completeness is very rare, but from available literature I am inclined to believe that cases of less degree are not so unusual, I assign my case to this variety because it seems to differ only in degree from the description given of *Schistosomes*.

The reports of recorded cases are very incomplete and

nearly valueless for correct statistics and obstetrical instruction. I find but few recoveries recorded, one spontaneous; "the skin growing gradually over the transparant covering" (J. Tracy Simpson) and one by operation (Barton). Dorsett operated on a case unsuccessfully. The majority of the reports are silent as to recovery or death taking place. we learn that recovery takes place only in cases where the opening is not more than three inches in diameter; that delivery is apt to be premature; that typical cases die very soon after birth; that hydramnion is usually present; the position is likely to be transverse, with presentation of the visceral mass. One observer states that out of fifteen cases presentation of the abdomen was met with in thirteen.

Deformities other than cleavage and eventration are likely to be present. In my own case labor was normal, time premature by one month, position second; presentation vertex occiput anterior. The mother was primipara, blonde, age 24 years. She entered the hospital (Mary Thompson) in labor and was delivered five hours after entering by Dr. Isabella Herb, interne. Lying-in uneventful. The baby weighed eight pounds, was fairly well nourished but greatly debilitated. The abdominal wall presented an elliptical opening, three inches long and by two and one-half in width. The cord was situated near the inferior left border of the opening, enclosed by the expanded end of the amnion of the cord. No other deformity of the body present. The kidneys and bowels acted normally. The child took the breast well but did not gain in strength. The temperature rose with the appearance of a ring of inflammation about the border of the cleft. The abdomen became swollen and tympanitic, indicating the probable presence of peritonitis. Beneath the transparent covering patches of lymph were visible. The child was so weak an operation seemed unwise as it could only hasten the inevitable. On the fourth day after birth, about the time for the normal falling of the cord, rupture of the membrane seemed imminent. On the fifth day, when the dressings were removed in Dr. D. W. Graham's surgical clinic in the Woman's Medical School, the dreaded event had occurred. Dr. Graham brought the edges of the opening together, after replacing the viscera, while the baby was under an anesthetic, as the doctor claimed "to make the baby decent for burial." The infant was returned to the hospital ward still sleeping. On waking it took nourishment and early in the evening passed a loose, green-colored stool. Temperature 102.4 degrees F. The day following, morning temperature,

6 A. M., 103.8 degrees F.; M. 105 degrees F.; 6 P. M., 104 degrees F.; after which temperature fell to 101 degrees F. and then to normal, varying from day to day; dressings removed on the fourth day after operation; all the sutures suppurating and part of them had pulled out of the tissues, evidently from tension. The edges of the abdominal walls varied from one-half to three-eighths of an inch apart; space filled in with lymph stained with fresh bile; loosened stitches removed, wound cleaned with bichl. hydrarg. sol. 1: 2000; wound redressed with gauze and roller bandage which was soon stained through with bile¹. For several days the bile continued to escape freely and the child seemed in imminent danger of dying from inanition, the temperature, falling to 98 degrees and 97 degrees F. Gradual contraction of the opening continued, and just as a fatal termination seemed eminent a change took place. The bile flow decreased, the points of suppuration began to improve, the child rallied and progressed toward perfect recovery. Twenty-six days after birth and twenty-one after the operation the child was dismissed from the hospital with instructions to return for redressings for supporting the weakened abdomen. The opening was entirely closed, a linear scar one to one-half inches long remained. The child grew well and strong and was soon lost sight of.

¹ I am unable to account for the discharge of bile. There might have been some faulty development of the bile ducts, or injury to gall bladder.

A CONTRAST.

One sits alone in his bare cold room,
 His trousers bagged at the knee,
 He is lonely there in the gathering gloom—
 An object of sympathy.

There is never a girl that knoweth him,
 Not one that he knoweth of,
 But he sits while the twilight groweth dim,
 Writing a song of love.

The other lolls in an easy chair,
 Making a party call,
 There are many maidens around him there,
 And he has a "stand in" with all.

Oh many the girls that are fond of him.
 And many that he's fond of,
 But sitting there in the lamplight dim,
 He never thinks of love.

HOMO SUM; HUMANI NIHIL A ME ALIENUM PUTO.

TERENTII, HEAUTON TIMOROUMENOS.—Act 1. v. 25.

This justly celebrated sentiment was unanimously adopted by the class of '96 as a fitting expression of its aims and future endeavor. Couched in its three most significant words, *Humani nihil alienum*, this noble maxim will take its place among the mural tablets as our watchword and motto. Apart from the context, which but poorly sustains the dignity of the verse we have chosen, the thought thus happily phrased by Terence rises to a height of moral grandeur scarcely surpassed by the loftiest utterances of the inspired Testament, whether the Old or the New. Nothing perhaps in the whole range of pagan wisdom can be found so exalted in its tone of broad philanthropy. It is indeed worthy of place with the treasured apophthegms of Marcus Aurelius and the most sublime precepts of the Tragic Trio of ancient Greece.

A few words relating to the author of the motto and the context of the drama from which it is taken may not be without interest. Little however that is authentic can be recorded of Publius Terentius Afer. About the beginning of the second century preceding the birth of Christ, the comedies of Terence, upon which his fame is securely based, were given to the Roman world. A Carthaginian by birth whence came his Agnomen—the African—he was either born a slave or after the defeat of Hannibal became a prisoner of war. In the life of Terence, usually attributed to Suetonius Tranquillus, the poet in company with a multitude of other Carthaginian citizens is said to have graced the triumph of the conqueror Scipio Africanus the Younger. This illustrious Roman, not less renowned as a patron of letters than as a warrior, quickly evinced his appreciation of the gifted captive by extending to him a singular token of his regard. The poet alone among the captured throng was privileged to enter the great capital soon to be the theatre of his fame—pileatus, i. e. wearing his hat as a mark of liberty. Another account somewhat different is this: Brought up in the household of a Roman senator named Terentius the youthful poet, as was customary with slaves on obtaining their freedom, took the name of his master and benefactor. Be this as it may, it is a well-authenticated fact that Terence enjoyed an intimate acquaintance with the first men of

Rome. At the height of his renown the genial poet met an untimely fate by shipwreck.

Now to the drama whence our motto has been taken. Two doting fathers, Chremes and Menedemus with their two reckless sons, each of the latter enamored of the inevitable "fair mischief" furnish matter of mirth and sweet distress in the delightful little comedy entitled, "The Self-Tormentor." It is conceived in Terence's happiest vein. Disapproving of his son's choice of a wife Menedemus drove the hapless youth from his home. But the aged father soon repented of his severity. To drown his sorrow he abandons his city house and purchases a farm adjoining that of the philosophic Chremes. Instead however of superintending the labor of his slaves, the grief-stricken parent works early and late, toiling in the fields. This singular mode of life in a man known to possess boundless wealth, arouses the curiosity of his neighbor Chremes. The opening scene of the drama discloses Menedemus hard at work with his spade, while his slaves in the adjacent field are enjoying themselves merrily. Chremes approaches, determined to learn the secret of this self-tormenting. Accosting Menedemus he asks for an explanation of his extraordinary conduct. Scarcely pausing from his toil to make reply Menedemus curtly expresses his surprise that Chremes should have so much leisure as to concern himself with others' affairs.

Then were uttered those famous words—at the delivery of which St. Augustine writes—"the entire audience, learned and unlearned alike, rose to their feet and gave voice to their admiration by round after round of tumultuous applause."

"I am a man," Chremes replied. "Nothing pertaining to my fellow man, can fail to possess an interest for me."

An instance of that "*Curiosa felicitas*" of the poets, this majestic sentiment was the result at once of felicitous inspiration and a unique deftness in the choice of words. Replete with the spirit of beneficence the exquisite verse evoked the admiration of some of the noblest minds of antiquity. Horace refers to it in his "Satires," (Bk II, Sat. III, v. 19,) Cicero quotes it approvingly in *De Legibus* and again in *De Officiis*, (I, 9.)

Referring to the difficulty we encounter in endeavoring to assist others he thus makes mention of the verse. "Interest in the affairs of others is indeed a difficult task, yet Chremes, that celebrated character in Terence avers that nothing pertaining to his fellow man is a matter of indifference to him."

The homage which Seneca (*Epist.* 51) accords this beauti-

ful thought may fittingly close our comments: "Iste versus et in pectore et in ore sit. Let that sublime verse be ever in your heart and upon your lips."

FRANK CONROY, '96.

RUSH MEDICAL CLUB.

"Respect the old; inspect the new."

The most loyal friends of an institution are those who are ever on the alert to see and improve opportunities for its betterment; not those whose affection serves to blind their eyes to every imperfection. Such conservatism would be particularly out of place in Rush, where the very air is full of the spirit of progress, and where the latest advances in medical science are ever welcome. It is therefore with the assurance of an interested hearing that there are here brought to the notice of the students two matters in which there seems to be still room for improvement, and for which we venture to suggest a remedy which will reach, at once, both conditions.

Although perhaps not the more important of the two, yet first to be mentioned, is the almost entire lack at present of the social element in our college life. In every literary college in the country there exist societies for the double purpose of the consideration and discussion of literary subjects, not directly in the line of the curriculum work, but such as naturally suggest themselves to, and occupy more or less of the attention of the students; and secondarily, for the development of the social side of college life by giving opportunity for better acquaintance among the men. In a college having the number of students that are enrolled as matriculates at Rush, there would probably be found several such organizations. These so-called debating societies form one of the most attractive features of college life, even, though the great majority of the questions discussed are of little practical interest to those taking part in their consideration, and cease to be of any interest whatever after commencement day. In the greater number of cases also the friendships formed die out entirely because of the divergence of paths in life when the campus has been left behind.

Our situation is a different one. We are here to prepare ourselves for our life work. The topics to which we are devoting our attention, and the questions which excite our keen interest, are the subjects that will become of more and more practical value to us, and upon the correct understanding of which human lives will depend. Moreover, after entering upon

active practice, our interests will run in lines more or less parallel. Our thoughts, our studies and our experiences will be in very similar channels. As a natural consequence we will continue to feel great interest in the course of the men who were our friends in college. The more of our fellow students we know, and the better we come to know them, the keener and wider will be our interest in them.

The second complaint which is to be made of existing arrangements, or rather lack of arrangement, is the absence of means in connection with the college whereby the students can keep themselves informed on topics of the day in our chosen line. Aside from the value of the actual information obtained from current journals, monographs and new books, the habit of keeping abreast of the times by the constant use of these means, and by the free discussion of them, is invaluable to a physician, in view of the tremendously rapid strides being made in these days in all branches of his profession.

For the correction of these two existing evils, the formation is suggested of an organization which might properly be called the "Rush Medical Club." Its objects would be those referred to above; briefly, the discussion of current medical literature and the development of the social side of our college life. I am warranted in saying that such a club would not only meet with the hearty approval of the faculty but would have also the active support and aid of many of its members. Incidentally I am strongly of the opinion that thus also would be practically solved the much discussed question of self government by the students.

While it is not the intention of this paper to suggest details, there may be mentioned a few points which will indicate roughly the outlines of the plan as it has so far presented itself.

1. The list of active members should be limited to members of the faculty, instructors, alumni and the senior or junior classes, the lower class men being admitted under certain conditions to the debates as listeners.

2. There should be secured as soon as possible a pleasant room, conveniently near the college, to be used as a reading room for the exclusive use of the active members of the club. This would serve as a place of meeting on ordinary occasions, and be a modest start toward more commodious and permanent club quarters. It might be possible, should the club provide suitable quarters for it, that the college authorities would allow the Allen library, now in their hands, to be given a home.

3. This place of meeting should be entirely away from the college building, to the end, if no other, that there might be in the club home, no feeling of association with the dust and grind of our daily routine work.

4. The list of periodicals might be made quite extensive by each member loaning to the club reading room the journal or journals to which he is a subscriber, they remaining, of course, his property. Each man would thus have the use of a large number of journals in return for the loan of his own.

5. Although the thought is not particularly poetic yet it is an undoubted fact that the flow of soul is greatly aided by a simultaneous flow of digestive fluids. A supper has been found to be a very successful provocation of oratorical efforts. This idea might be acted upon at stated intervals.

It is not an exaggeration to say that the medical profession is more bountifully supplied with organizations and periodicals than any other profession or business. Almost every county has its association. The proceedings of county, state, national and international conventions and of the stated meetings of different organizations of physicians fill hundreds of volumes annually. The men who compose these medical societies are the live physicians who keep up with the times and with the literature of the day in their profession. They are as a rule, the successful practitioners of the communities in which they live. This is the sort of practitioners which we all expect to be, and as the alumni of the Rush Medical Club we should find ourselves, by the experience gained there, by the practice of assimilating, classifying and speaking upon subjects of professional interest, prepared for active and unembarrassed participation in the proceedings of the local associations with which we become allied. The benefits of thus becoming speedily and favorably known to the profession locally and to the community are obvious.

It may be that this proposition to voluntarily take on more work will not, at first thought, meet with an enthusiastic acceptance and adoption, since the man who faithfully follows the course of study as laid down today in Rush, will not be heard to complain of lack of occupation or that time hangs heavy on his hands. We class ourselves among the very busy men, and rightly. But it is always the busy man who can find an hour to spare. The man who, literally or figuratively speaking, finds his desk piled each morning with work to be finished before night; the lawyer whose docket is overcrowded; the doctor whose waiting room is never

empty; these are the men who have time and brain to spare when demand is made upon them. The man of leisure is the one who never has a moment he can call his own. Some one has said that the acme of human bliss is to have twelve hours work to do and six hours in which to do it.

E. F. BURTON, '97.

PREPARATION OF ANTITOXINE.

How the presence of a toxic product in the body brings about the formation of an antitoxine by which the toxine is neutralized is still a mystery, but that such a substance is formed has been proven by a number of eminent and reliable experimenters.

Ogata, in a series of experiments made in the Hygienic Institute at Tokio in '90, discovered the important fact that the blood of an animal immune to anthrax contains some product which neutralizes the toxic products of the anthrax bacillus. When cultures were made in the blood of frogs or white rats, which animals have a natural immunity to anthrax, they were found not to kill mice inoculated by them. Further experiments show that mice inoculated with virulent cultures of anthrax did not succumb to anthrax septicemia, if at the same time they received a small injection of the blood of an immune animal. Following this experimentation there was proof of the presence of a substance in the blood which renders an animal immune.

Ogata of Tokio was able to isolate from the blood of chickens and dogs a substance to which he ascribes the immunity of these animals in certain diseases and the power of their blood to protect susceptible animals from the same diseases. The substance he found to be soluble in water and glycerine but insoluble in alcohol and ether by which it is precipitated without being destroyed. Its activity he found to be neutralized by acids but not by weak alkaline solutions. Ogata supposed the substance he had isolated to be the active agent in the blood serum by which certain pathogenic bacteria are destroyed. Since his discoveries and the experiments of his collaborators the question of antitoxine has received more study, the preparation a greater degree of perfection and more skill in its use attained.

From all previous study it can be deduced, that the first and necessary thing in a preparation of antitoxine of a specific kind is the proof of the presence of bacillus from which to be-

gin. This at present is quite simple and may be done by inoculating a suitable medium, preferably bouillon, with material obtained from the throat of a person who is suspected of having the disease, say diphtheria. After being grown for a sufficient time the culture is then injected into the body of an animal as the guinea-pig and if the characteristic lesion appear the identity is established.

The bacillus is now farther used for the purpose of propagation of toxine product to be used in the preparation of the antitoxine desired. The toxine is obtained from bouillon impregnated with the bacillus and grown at a suitable temperature.

The apparatus used is a flask with two or three openings into which the medium has been placed, and this placed in a graduated incubator. The culture grows for 24 hrs. within the incubator, at the end of that time a current of moist air is allowed to pass over the culture. This process is supposed to favor growth. At the end of 24 hrs. the process is discontinued and tests are made; no foreign organism being found, the bouillon is passed through an unglazed porcelain filter and a clear yellow sterile liquid is the result. To this is added one-half of carbolic acid. This carbolized filtrate is our diphtheria toxine to be further of use in the production of the anti product. For the preparation of antitoxine living animal tissue is of most use and those animals who have the least reaction to the poison and the most blood from which to draw serum are chosen. Goats, sheep, dogs and horses have been used but the one best adapted and most used is the horse. The animal must be one in good health and absolutely free from renal and tubercular disease. The animal is inoculated with the toxine already described. The site of inoculation is preferably at the back part of the shoulders or sides of neck. These fields are first clipped, shaved and sterilized. Then a number of injections are made. One experimenter describes this operation as follows:

A large quantity of the toxine is divided into two parts, one of which is injected into each side. These injections may be commenced with as small a quantity as 5cc and increased to as much as 250cc or until immunity has been reached. The animal usually shows no violent symptoms. Loss of appetite and bad temper which begin as early as 23 hrs. from injection continue for 4 or 5 days, when they gradually subside. A single injection never is enough to establish immunity. As many as eleven injections have been recorded by Dr. Kitchen before immunity was reached. The time required in this par-

ticular experiment was one month and 16 days. Four days after the administration of the final injection the first blood was drawn. The method of bleeding consists in locating the jugular vein and dissecting down upon it. An incision about two inches in length in the course of the vein being made the surrounding structures being detached and vein brought well into the wound by means of a hook. Then with a pair of scissors the vein is cut and blood is received into vessels which have been previously sterilized. When a sufficient quantity has been drawn the wound is closed by means of silk sutures which approximate the wounded muscles and bleeding ceases in a few minutes. This bleeding operation must be attended with as much cleanliness as the inoculation.

The blood as soon as drawn is covered by a cap over the mouth of the containing jar and set aside to cool and coagulate. This requires from one-quarter to one-half hour. The "buffy-coat" characteristic of the slow coagulation of horses' blood often appears and this must not be mistaken for the serum. As soon as the blood has firmly clotted a clean spatula is passed between the clot and the sides of the jar so as to thoroughly loosen the clot from top to bottom. The blood is now set aside in a cool place for 24 hours. After this period a quantity of transparent straw colored liquid will be found on top and at the sides of the contracting clot. This is carefully drawn from the jar into a clean vessel. During the removal of the serum the blood must not be agitated or else red corpuscles will rise and spoil the serum. On the second, third and fourth days additional quantities of serum may be taken from the blood provided the blood is kept cool and sweet. So long as the serum remains clear, straw-colored, (not red) and sweet it is available. This serum is our antitoxine.

Serum or antitoxine will, when exposed to air quickly undergo putrefactive changes and instead of being antitoxine become the most potent toxine. A proof of this, one experimenter says that a specimen of serum brought to the laboratory for examination was found to contain literally myriads of pathogenic bacteria.

This must be the result when we remember that serum forms the most prolific culture soil known. To obviate this the serum must be treated with some chemical which will prevent the growth of bacteria and preserve the serum. The question of such preservation is not a matter of indifference. The agents used should be, first, odorless; second, non-toxic when injected in considerable quantities and third, without del-

eterious influence upon the antidotal proteid contained in the serum.

The substance should be odorless so as not to disguise the faintest trace of putrefaction, which is at present our best rough test for the serum's freshness. The objection to carbolic acid and trikresol is that they have caused poisoning when injected in considerable quantity called for in the large dose of serum. Farther when these substances have been added to serum, they form a precipitate with some of the proteid substance which reduces the quality of our preparation.

Besides the named drugs, chloroform, formalin, thymol, boric acid, salicylic acid and sodium salicylate have been used; most of which have been rejected from various reasons. The one which has been found to answer in every respect is sodium salicylate. It is odorless. It dissolves rapidly in serum without forming any precipitate or cloudiness.

Its influence in injection in quantity required appear to be perfectly harmless and its therapeutic effects are perfectly known. It has been recommended by some even with the careful antiseptic preparation of the serum that keep it be kept in contact with ice until time of dispensing.

The chemical preservation is an important factor in the preparation but no serum can be said to be completely prepared until its value has been tried. For this purpose the guinea-pig and other animals are used. An animal is inoculated with the breillus of diphtheria or toxine and at the same time or some subsequent period a dose of antitoxine is given. If the animal shows none of the usual signs of diphtheria poisoning the virtue of the preparation may be said to have been established.

To review the points in the production of diphtheria antitoxine we may state them thus:

1. Obtain a pure culture of highly virulent diphtheria bacilli.
2. Put the cultures into the incubator for two or three weeks then add one-half per cent. of trikresol and filter.
3. The secret of the highly potential toxine is in the virulent character of the toxine, and in the virulent character of the organisms employed.
4. The immunizing injection in the horse must be pushed more rapidly than is usually done.
5. The advantages of sodium salicylate as a preservative agent for the diphtheria antitoxine.

H. W. MANNING, '97.

THE RUSH MEDICAL GLEE CLUB.

At a meeting held in the physiological laboratory Wednesday evening, Jan. 22d, about 40 students were present and also prospective members of the mandolin club. The meeting was called to order by Mr. W. A. Metzger of the class of 1896. Prof. Dodson first addressed the students present on the purposes and object of the meeting. He called attention to the fact that the lengthened curriculum and thoroughly graded course of the last few years had made possible a much larger and more enjoyable social life among the students of the medical colleges. This had found expression in our own college in the organization of our successful athletic association with its base-ball nine and foot-ball eleven. Unfortunately, however, the lack of gymnasium facilities precluded indulgence in athletics during a large part of the term and even during the warmer season when outdoor games were possible, only a limited number of the students participated in them. He was especially glad therefore that another line of exercise and culture was to be developed. The organization would consist in the cultivation of music for the engagement and profit of its own members, but incidentally the whole student body would participate in the advantages of such an organization and it would contribute greatly to the programs of occasional college exercises. He felt sure, therefore, that the students as a whole would appreciate highly and support cordially a musical club. The faculty, too, would heartily approve and support the movement and Prof. Dodson pledged his individual assistance in meeting the expenses of the club.

It was found that all of the students present were able to read music and were more or less familiar with part singing. It was stated by the chairman that over 110 students had signified their intention of joining the club. A large and efficient organization is therefore assured.

Officers were then elected as follows:

President—W. A. Metzger.

Secretary pro tem—W. D. Bird.

Mr. C. F. Jones, a competent director, who was present, by invitation, then took the club in hand and considerable progress was made in arranging the voices for the various parts and planning for future work. It seemed to be the gen-

eral opinion that while rollicking college songs should be acquired, and if possible some new ones, with a local flavor, secured, good substantial part songs should constitute the basis of work. A piano will be secured for the succeeding practice nights and already three or four competent accompanists have tendered their services.

The mandolin and banjo clubs have already a membership of twenty-four excellent musicians, many of whom have played with other college clubs. Negotiations are being made for a director. The students and all who are interested in the welfare of Rush college will be gratified to learn that the musical forces of the college are thus to be brought together and made more efficient and we feel sure that they will give their hearty support to these organizations, financially and otherwise, as they have already been given to the athletic association.

At a meeting held Jan. 27th the following officers were elected:

A. M. Dwight, '96, president.

A. Price, '97, leader Banjo Club.

E. Jones, '98, leader Mandolin Club.

W. C. Rucker, '97, Manager.

RIVAL CHARGES.

The glorious charge of the Light Brigade,
By Tennyson famously sung,
Is nothing to that which my doctor made
For taking a look at my tongue.

—*Yenowine's News.*

THE NURSE THROUGH STUDENTS' EYES.

The medical student is usually looked upon as a cold-blooded, feelingless creature devoid of the higher sentiments of our human nature. Nevertheless there is much sentiment in him. It would be interesting to read the various thoughts and feelings that occupy the student as he sits day by day in the clinic, ostensibly watching operations, and to note the variety of subjects to which these thoughts and feelings turn. It is not always science that leads his thought, or suffering and blood that arouse his emotions.

The nurse is always there—indispensable in a professional way to later day surgery and to the weary student, a most charming distraction. She challenges first his admiration by her strict attention to duty, then by her gentle, tender and womanly kindness she easily invites his sentiment. "The nurse through students' eyes" becomes the loveliest of lovely women. She comes to mean to him a palliative to all pain, a comfort in all sickness. Her very presence suggests cheerfulness and tranquility. She simulates his ideal, or his ideal simulates her, until finally they coalesce and she is in truth his ideal. It is but a step from others to himself, from sickness to health, and she is indispensable to his happiness. No wonder that such a large percentage of the graduates of the Illinois Training School are captured by the disciples of Æsculapius!

To the student, in his dreams, striped gowns and dainty white caps, a kindly woman's face and a halo go together. No wonder his admiration is unbounded—she deserves it. Well may he after some stern years of practical life look back at his successors on the benches and envy them their lot. Well may he sigh for the objects of so many of his fancies and his dreamings.

Never pass a sound into the uterus without first demanding a full history of menstruation; attention to this rule will often prevent tendering the designing patient a cheap abortion. Even with a clear history, remember the rule of the elder Goodell: "Cervix hard as the tip of the nose, no pregnancy exists; cervix soft as your lips, pregnancy almost certain to exist."—*Canadian Medical Review*.

Alumni Department.

JOHN MILTON DODSON, A. M., M. D., EDITOR.

MEMBERSHIP IN THE ALUMNI ASSOCIATION OF RUSH MEDICAL COLLEGE is obtainable at any time by graduates of the College, providing they are in good standing in the profession, and shall pay the annual dues, \$1.00. This fee includes a subscription to THE CORPUSCLE for the current year. This journal is the official organ of the Association.

Dues and all communications relating to the Association should be sent to
JOHN EDWIN RHODES, M.D., Sec'y and Treas., 34 Washington St., Chicago

The editor of the alumni department feels constrained to make an urgent appeal to the alumni for "matter" with which to fill this column. Ever since this department was inaugurated he has been obliged to rely almost wholly on the meager notes gathered from letters to the Secretary and Treasurer of the association containing subscriptions and dues. While it is hoped that the matter thus gleaned has not been without interest, he realizes that such notes are far from sufficient to make up a readable and enjoyable alumni department. This column is intended for the interchange of news and opinions by the alumni of Rush Medical College, and with the co-operation of its readers can be made full of interest and profit to all. To you individually reader of this note, the editor appeals for a more active interest in this column. Items of interest about yourself or any of the sons or friends of "Old Rush," though they may seem trivial to you, will always be of great interest to some, and often to many, of your fellow alumni. Notices of marriages, births, deaths—yes, even of divorces, if any of our alumni chance to be so unfortunate; of the election or appointment of yourself or others to public office, college positions, hospital or dispensary places; notices of change of location; notes of interesting or troublesome cases; your views on the policy or progress of the college, or, indeed, on any live medical topic—these are among the topics on which the editor wishes to hear from *you*. And he would like to hear *now*, or in time for the next issue of THE CORPUSCLE. All such communications should be addressed to the editor of this department at Rush Medical College, Chicago, Ill.

'95—Dr. G. N. Ryan has located at Des Moines, Ia and

has entered into partnership with Dr. J. R. Ryan. He was in Chicago recently, attending a few lectures and clinics at Rush and laying in a supply of books and instruments. He will be on hand at commencement, for he says he cannot afford to miss it.

'85—In the list of surgeons in attendance on the meeting of the C. M. & St. P. Ry. Surgeons Association in December, published in our last issue, we omitted, by accident, the name of one of the most enthusiastic and loyal of the graduates of Rush, Dr. F. J. Gobar, of Durand, Wis.

'90—Dr. L. A. Fairchild has removed from Randall, Kan., to Alma in the same state.

'93—Dr. James H. Raymond, who is now located at Wailuku, Maui, H. I., has recently been appointed government physician for the Malulani hospital and the District of Wailuku, Island of Maui. We are pleased to hear of his great success in this field, and that he is having a wide and varied experience.

DR. EDWARD H. TINEN.

Dr. Edward H. Tinen, of the class of 1893, and late chief of internes at the Cook County Hospital, died in Chicago at the residence of his brother, 701 W. Congress street, January 28, 1896, of typhoid fever. Dr. Tinen was one of the most brilliant students ever graduated from Rush Medical College, one of the most noble and charming of men, and having made rare use of exceptional opportunities, was equipped as few men are for the practice of his profession. He has been stricken down on the very threshold of a brilliant career.

A more extended obituary notice will appear in the next issue of THE CORPUSCLE.

COLLEGE NOTES.

It is the intention of THE CORPUSCLE to devote, each month, a certain amount of space to items of local interest pertaining, especially, to faculty and under graduates. In order to make this department interesting and a success we ask the co-operation of students and faculty. The fact is easily appreciated that it is impossible for five men to obtain all matters of interest which may occur in connection with so large an institution as Rush. Therefore assistance rendered the editors will be timely and fully appreciated.

It is in this department that students trying for positions on the board can furnish material which will tell greatly when the final decisions are made in regard to filling vacancies. Of all material, thus handed in and published, accurate account will be kept and judgment will be made based upon both quality and quantity. Material must be placed in THE CORPUSCLE box in the college office by the 21st of each month.

* *
*

Friday, January 31st, Professor Bevan was married, at the Lakota Hotel, to Miss Anna Laura Barber, of this city. It was the first intention and, in fact, the invitations read to the effect that the wedding would take place February 3rd, at the former home of the bride in Barberton, Ohio. However, it was ascertained, at the last moment, that the ceremony could not take place in Ohio, as neither of the contracting parties were residents of that state. In order to obviate this difficulty a secret wedding was held in Chicago and the former plans were also carried out in every detail, the mock wedding taking place in Barberton, Monday, February 3rd. The occurrence of the real marriage was kept a profound secret until after the mock ceremony. The affair of Monday evening was especially brilliant and a complete success. It took place at Barberton Inn, a magnificent hotel erected a few years ago by Mr. O. C. Barber, father of the bride. About two hundred guests were present to heap congratulations upon the happy bride and groom.

Mrs. Bevan is the only daughter of Ohio C. Barber, president of the Diamond Match Company, and although formerly of Akron, Ohio, she has lived in this city many years. The bride is a beautiful woman; a brunette, above the medium in height, unassuming yet dignified in appearance. She is inter-

ested in many charitable institutions and is ranked among Chicago's social leaders.

THE CORPUSCLE congratulates Professor Bevan and wishes him a long and happy wedded life. We also congratulate the bride and gladly welcome her to Rush as a new member of our faculty.

* *

On Monday evening, Jan. 20th, Prof. Etheridge finished his lectures on the Code. His lectures were exceedingly interesting and instructive and were well attended, the audience consisting of lower class men as well as seniors. The Professor emphasized and illustrated with great judgment the important points which should be observed in medical etiquette. The fact that his illustrations were from actual experience and his advise the result of many years of observation greatly enhanced the force of his remarks.

* *

Dr. A. J. Oschner will leave, shortly, for Europe to join his brother, Dr. E. H. Oschner, who has been studying abroad since the close of his internship in Cook County hospital last December.

* *

At the regular annual meeting of the Cook County Hospital Alumni Association, held January 22nd, in the Masonic Temple, Dr. J. A. Fordyce, of New York city, read a very interesting paper on "Malignant Affections of the Skin." The discussion was opened by Professors James Nevins Hyde and N. Senn.

* *

Dr. A. T. Holbrook '95, interne in Presbyterian Hospital, and former editor-in-chief of THE CORPUSCLE, has recovered from a severe attack of typhoid fever and is at present rapidly recuperating at his home in Milwaukee.

* *

Wednesday, Jan. 29th, Professor Etheridge delivered an address in New York City before the nintieith annual meeting of the Medical Society of the State of New York. At this meeting, beside the regular papers for discussion, three addresses were given by invited guests; these gentlemen being, President Eliot, of Harvard University; Professor William Pepper, Dean of the Medical Department of the University of Pennsylvania, and Professor Etheridge. We deem it a high honor bestowed upon Professor Etheridge that he should be chosen to speak in company with such eminent men as President Eliot and William Pepper. The subject of the Professor's address was

“Deficient Excretion from Kidneys not Organically Diseased and some of the Disorders Peculiar to Women.” The address will appear in full in the March number of THE CORPUSCLE.

* *

The man who says that “talk is cheap”
Perchance forgets the price
That he has often had to pay
For medical advice.

* *

The following members of the faculty have been recently appointed by the board of county commissioners as attending men to Cook County hospital: James B. Herrick, A.B., M. D., physician; Ludwig Hektoen, A.B., M. D., pathologist and director of the hospital laboratories; A. I. Bouffleur, M. D., surgeon; D. D. Bishop, M.D., dermatologist; F.A. McGrew, M.D., gynecologist.

* *

They tell a good story on Dr. Boulware, of Butler. A lady brought her child to him in great alarm as to the fate of a nickle which had been swallowed. The doctor very gravely asked her if the coin had a hole in it and upon being assured that it had not, he gave her a little powder of saccharum lactis and assured her that there would be absolutely no danger. As the lady was leaving, full of curiosity, she turned and enquired: “Doctor, why did you ask if the nickel had a hole in it?” “For the very best of reasons, madame,” returned the physician, “don’t you know that a nickel with a hole in it wont pass?”

* *

H. Owen, '97, who has been quite seriously ill for some time with diphtheria has gone to Maine where he hopes to fully regain his former health and vigor.

* *

Is Cupid a good archer?
Though oft his arrow hisses,
And all his aims seem fairly true,
He’s always making *Mrs.—Ex.*

* *

Professor Bevan has been appointed attending surgeon to St. Luke’s hospital, and Dr. Bishop pathologist to St. Elizabeth hospital.

* *

Tourist:—What is the mean temperature about here?

Boomer:—Stranger, thar ain’t any mean temperature hyar abouts, its allus delightful.

Dr. Montgomery, who since November has been studying in the laboratories of Mr. Malcolm Morris, in London, has departed for Paris, where he will pursue his studies with Darier, the noted dermatologist.

* * *

General—"Fight like heroes, boys, until your powder is gone, then run. I'm a little lame, so I guess I'll start now."—Ex.

* * *

Frank Baldwin, '97, was detained at his home in Peoria, Ill., for some time by sickness but is now back and hard at work.

* * *

During the absence of Professor Bevan his place, in the lecture room, will be filled by Drs. Le Count, Shaw and Parker.

* * *

The following verses were "passed down" to Professor Dodson during a recent lecture, prior to the last examination in physiology. We publish them at the request of Professor Dodson:

We beg you go easy, dear doctor,
We *don't* want our vacation marred
By thought of a flunk, in a subject
You know is most terribly hard.

The cord in our dreams has appalled us,
The brain has become a nightmare,
The tract and the nerves have quite crazed us;
We beg you, professor, be fair,

Don't give us Wallerian methods,
Don't give us the course of a nerve,
Don't give us the parts of the larynx—
Just give us the things we deserve

And if you will let us off easy
To you will the honor be due
Of helping the wild '97's—
Go easy, dear Doctor, PLEASE do.

* * *

C. W. Rummel '99 is in Presbyterian Hospital, sick with appendicitis.

* * *

We understand that the Cook County Quiz Class has been organized for next year. The class is unfortunately small, being composed of but one member, Moran '97. For particulars consult this lone representative of our learned class. We are also informed that Manning, '97, contemplates the formation of a rival quiz class.

At the last meeting of the Athletic Association, Dr. Bevan was re-elected president; Friedberg, '97, secretary and Frank Gould, treasurer.

Frost '96, was appointed base-ball manager with Fessler, '98, as assistant and Hollenbeck '98, foot-ball manager with Barrett, '97, as assistant.

* *
*

AN ALL-ROUND MAN.

In the class room while students
More brilliant are known,
He finds no great hardship
In holding his own.

On the gridiron and diamond
With victories sown
There too he is in it
And holding his own.

And now in the evening,
When daylight has flown,
But words are too feeble—
He's holding his own.—*Ex.*

* *
*

Russell '97, is sick with typhoid fever in the Presbyterian Hospital.

* *
*

McGrew—What is the treatment for cholera?

Murphy '97—Salol, as an antiseptic, with a barrel of whisky.

* *
*

Palmer '96 (of Professor Senn's consulting staff) "This patient has six children, two dead and four living, all in the best of health."

* *
*

Cassius Leason, '97, has been suffering from an infected arm but is slowly recovering.

* *
*

A SHREWD SERVANT.

An incident which happened a few days ago in this city shows that servant girls are about as sharp as the average run of people. Mrs.—is a married woman who is evidently unable to keep a servant girl more than six weeks. She is overbearing and tyrannical, and makes it intensely hot for the domestic. A few days ago, so the neighbors say, her servant came in and said, as her month was up, she would take her money and go. "My gracious, Maggie, you must stay a few weeks longer. You know that I expect to be sick soon. I will

give you \$10. more a month." "I can't stay, ma'am. I have engaged another place." So the hard-hearted Maggie packed her trunk, and an hour later, as she was then leaving, she said: "If you please, ma'am, I hope the boy will be a fine one." "Why are you so positive about it being a boy?" "Why, sure, ma'am, no girl would stay with you nine months."—*The Medical Brief*.

* *

A CASE ILLUSTRATING THE USE OF ARTIFICIAL INFLATION OF THE LUNGS IN NEW-BORN CHILDREN.

On October 21st, I delivered a primipara, of a full-time male child, presenting by the vertex, about three hours after complete dilatation of the os uteri. The forceps had not been applied. On being born, the child appeared motionless and dead; its limbs were in a condition of extreme flaccidity, and its skin of cadaverous appearance; there was no accumulation of mucus in or about the larynx. A slight attempt at gasping led to endeavors being made by artificial respiration, hot and cold suffusion, application of ammonia to the nostrils, and the rubbing of brandy upon the chest; but these had but little or no effect in restoring animation. A small quantity of dark venous blood was allowed to escape from the cut surface of the cord. An interrupted currency, both primary and secondary, applied to the neck and over the diaphragm, did not improve matters. The conjunctiva was insensitive to touch.

The remedies were adopted for fully half-an-hour, and were continued so long as there were several slight attempts at respiration, similar to those observed immediately after the birth of the child. There had not, up to this time, been the slightest movement of the limbs, and the case looked extremely hopeless. Remembering a suggestion thrown out by Playfair I then decided to pass a large-sized catheter into the larynx. and through it to inflate the lungs of the infant. With but little difficulty this was accomplished, and after several times inflating through the tube, the ribs were seen to be moving gradually more and more, till sufficient air was expelled through my catheter to extinguish the light of a candle held near its extremity. Finding that the natural efforts at respiration were becoming satisfactory, I removed the catheter, and was gratified by hearing a distinct cry and also by seeing some movement of the infant's extremities.

[] The child subsequently progressed perfectly well, and when I last heard of it, it was strong and hearty.

GEORGE H. RODMAN, M. D.

—*In Guy's Hospital Gazette*.

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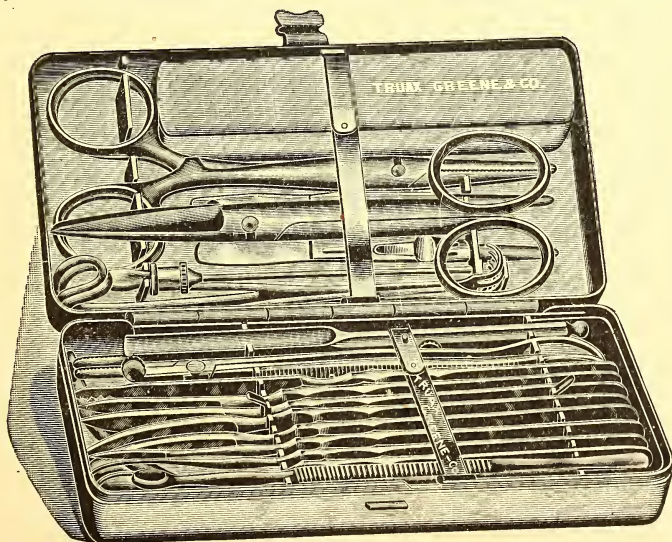
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BOOK REVIEW.

PEDIATRICS: THE HYGIENE AND MEDICAL TREATMENT OF CHILDREN. BY THOMAS MORGAN ROTCH, M. D., Professor of the Diseases of Children, Harvard University. Pp. 1106; illustrated. Philadelphia; J. B. Lippincott Co.; 1896. For sale by the W. T. Keener Co., 96 Washington St., Chicago.

This is one of the most complete and elaborate works on this subject extant, and is certainly a superb volume. The book begins with the infant at birth and follows it through its various stages of development up to puberty. Some idea of its completeness may be gathered from the subdivisions of the contents which are as follows:

Introductory chapter; normal development; hygiene of the nursery; feeding; premature infants; general principles of examination and treatment; the blood in infancy and childhood; diseases of the new-born; syphilis-erysipelas-the exanthema; diseases of the nervous system and the myopathies; diseases of the mouth, nose, naso-pharynx and pharynx; diseases of the œsophagus, stomach and intestines; diseases of the larynx, trachea, lungs and pleura; diseases of the heart and pericardium; and unclassified diseases.

After dwelling at considerable length upon normal development, the author takes up abnormal development and conditions, beginning with the most common diseases first, and devoting considerable space to observations on the blood of infants. All these with the exception of a few rare diseases of which it was impossible to get satisfactory types are illustrated by actual cases which have come under the author's care or observation.

The division on artificial and scientific feeding of infants is very extensive and forms perhaps the most important and satisfactory part of the book. Artificial methods are clearly and fully discussed; even the characteristics of cows which produce milk suitable for infant feeding are shown, both by picture and text. It is this one feature of the work that won so many words of praise for the book upon its advance sheets, and it is this feature that will, if nothing else does, hold it in esteem by the practitioner in general.

Diseases of the skin, nervous system and all the other organs are well considered and well presented.

Its extent and thoroughness makes it almost an indispensable necessity for every physician to have this book in his library and it will certainly prove to be a very valuable addition.

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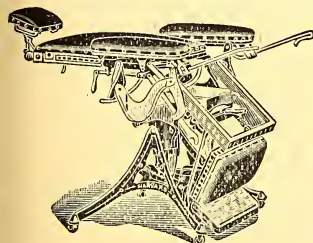
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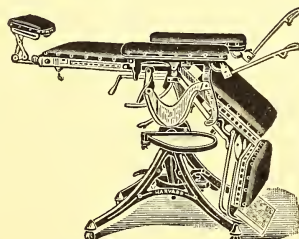
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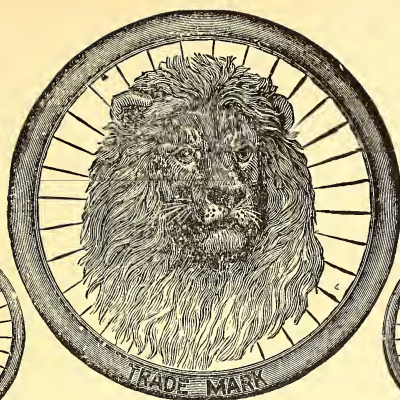
A NEW PULSIMETER.

We have received from Mr. Redepenning, a specimen of a watch bearing a new and ingenious device for registering the pulse-rate quickly, accurately, and in the dark.

The directions for use are as follows: To find the rate of pulse per minute press the keyless button with the finger of one hand, thus starting the chronograph hand, while, with the finger of the other hand on the pulse, mentally counting the arterial beats. When these have reached twenty again press the keyless button, and the figure at which the chronograph needle stops indicates the pulse-rate per minute. A third pressure of the keyless button will bring the needle back to its starting point opposite the figure 12, and until this is made the watch will be registering the pulse-rate that was last taken. A little practice is required to enable the physician to use the watch with perfect precision.

The advantages of the device are two, and both are undoubted, though not of equal value. 1. The pulse-rate can be accurately obtained in the brief space of ten to fifteen seconds. This is not a great advantage. The physician who cannot spend one minute in taking a patient's pulse must be very overworked, and many useful little indications as to the condition of the circulation which would be apparent to the finger resting on the artery for a minute might not be apparent to him in fifteen seconds. 2. The number of pulsations can be calculated without looking at the watch. This is a real and great advantage. It means that the pulse can be taken in the dark and without the patient's knowledge. In many susceptible patients the mere fact that their physician is taking the pulse causes the rate and rhythm of the pulse to alter. With the device attached to his watch and his finger in his pocket on the keyless button, the physician can observe by eye the beat of the temporal artery, can start the chronograph hand and shut it off again at the twentieth beat, and the patient's pulse is registered. The watch can be looked at, and the pulse-rate ascertained and, if necessary, written down at the physician's convenience. The possibility of taking the pulse in the dark is also very useful. Many a time the physician must have regretted that the bringing a candle to the bedside to enable him to count the pulse-rate has disturbed the patient. We refer more especially now to the house-surgeon or house-physician, who is responsible for accurate details to his superior officer. He might have quite sufficient experience to enable him to feel satisfied that the pulse is normal, or too quick or too slow; but as it is his duty to satisfy another on these points he must have an accurate written register to support his mental impression.

It will be gathered that we consider that Mr. Redepenning's invention is distinctly one with practical uses; and it should be added that in the



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specimen submitted for our opinion the device has been attached to a strong, serviceable watch with a good movement, which has also proved during its period of trial a reliable timekeeper.--*The Lancet*, April 21, 1894.

HOW TO TREAT A COUGH.

In an able article under the above heading in the *New York Medical Journal*, Edwin Geer, M. D., Physician in Charge of the City Hospital Dispensary; also Physician in Chief, Outdoor Department, Maryland Maternite Hospital, Baltimore, writes:--

"The object of this brief paper is not to try to teach my colleagues how to treat a cough, but simply to state how I do it, what good results I get, and to call their attention to those lighter affections of the throat and chest the principal symptom of which is an annoying cough, for which we are often consulted. The patient may fear an approaching pneumonia, or be anxious because of a bad family history, or the cough may cause loss of sleep and detention from business. What shall we do for these coughs? It has been my custom for some time to treat each of the conditions after this general plan: If constipation is present, which is generally the case, I find that small doses of calomel and soda open the bowels freely, and if they do not, I follow them with a saline purgative; then I give the following:

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RUSH MEDICAL COLLEGE, CHICAGO, ILL.
MEDICAL DEPARTMENT LAKE FOREST UNIVERSITY.

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DEFICIENT EXCRETION FROM KIDNEYS NOT ORGAN- ICALLY DISEASED AND SOME OF THE DIS- EASES PECULIAR TO WOMEN.

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LOGICAL SOCIETY, HONORABLE PRESIDENT INTERNATIONAL SO-
CIETY OF OBSTETRICS AND GYNECOLOGY.

Infection is one of the most absorbing topics in the healing art today. The enormous range of surgical infection is strewn with tragedies. A large portion of a surgeon's life work is devoted to dealing with the complications arising from septic absorption. His satisfaction in his cases is secured only when he is certain that they have escaped it.

Infection in medical cases has been studied in every possible direction. Every new text book contains further and greater investigation in each infection which its immediate predecessor of a few months earlier, failed to record. The medical world is aroused in the pursuit of these inquiries. The last quarter of the present century will have erected a monument to medical advance whose equal has never been produced.

The era is just dawning upon us wherein a line of infections as old as the human race is about to receive the attention of the medical world. They are the *Auto-Infections*. They have, as yet, received but a minimum of our consideration. They enter the most largely into the causations of death, because they are almost always present in all fatal cases wherein traumatism has not acted a part.

Toxic materials always reside within the human body.

They constitute the waste products of living beings. From birth to death they battle for supremacy. So long as they are plentifully excreted, death is postponed. The skin, the pulmonary mucous membrane, the bowel and the kidney constitute the avenues of escape of all toxic materials from our bodies. If one of these emunctories be crippled the initiation of death is manifest. We never prescribe for a medical case that does not prevent this crippling. The physician who busies himself with solving the problem of the initial departure from the proper performance of excretion of anyone of these emunctories, enters a new field of labor. It is the most interesting one that he can invade today. In it he encounters myriads of human beings a long way ahead of the time when they consult medical talent. Herein he deals with the beginnings of disease. He soon learns to regard the causes of the diseases that he treats as far removed from the organs whose initial departure from healthy action must be held responsible for what he treats, as in gout, in pneumonia or in rheumatism.

The chief sources of auto-infections are the tissues, the secreting organs, foods and putrefactions. All of the secretions and excretions contain poisons. Feces, urine, bile, saliva, carbonic acid and sweat are poisonous. Even the blood is toxic. It is continuously being traversed by a current of toxic material. In health its elimination is incessant therefore it does not kill. If its excretion is interfered with so that it becomes two and one-half times greater than the normal quantity it will produce death.

The writer desires to call attention to only one of these emunctories in this paper—viz., the kidneys—and to one fault of these organs and that is their *insufficient work* independently of their organic diseases. He desires to direct attention to this phenomenon in only one class of patients, the gynecological patients. Women with sound kidneys, so regarded, alone are referred to. No allusion is here made to patients with organically diseased kidneys; such women are relegated to the nephrologist. Concerning them this declaration is laid down. *Very many gynecological patients suffer greatly from renal insufficiency and properly selected diuretics will relieve many of their symptoms commonly referred to the reflexes from pelvic maladies.* Due attention to this condition assists greatly in curing these patients who are numbered by the thousands. These thousands are the ones who do not need the brilliant exploits of the gynecological surgeon. They comprise that vast number of

women who frequent our offices twice or thrice a week for stated treatments.

Urine is composed of water and certain solids dissolved in it. The amount of solids is proportionate to normal body weight. This proportion is fairly constant—enough so to constitute a safe working base. If the solids are excreted in sufficient quantity, a normal condition exists. If they fall short of it, say twenty per cent., an insufficient quantity is excreted, a condition called “renal insufficiency.”

To arrive at a more definite conclusion I have had an expert physiologist construct the following table, showing the amount in grains of normal excretion of urinary solids in human beings weighing from ninety to a hundred and eighty pounds. Since these figures refer to perfectly healthy human beings, it is safe to adopt a diminished amount of grains of excretion as a working basis. Accordingly, the two extremes of estimates of the urinary solids may be safely adopted as five hundred and eleven hundred grains:

Weight.	Urinary Solids.
40 pounds.....	392 grains.
50 “	479 “
60 “	563 “
70 “	639 “
80 “	716 “
90 “	789 “
100 “	854 “
110 “	916 “
120 “	974 “
130 “	1028 “
140 “	1078 “
150 “	1150 “
160 “	1198 “
170 “	1237 “
180 “	1260 “
190 “	1300 “
200 “	1330 “

To estimate the urinary solids is an extremely simple matter. To be of value, we must understand in a general way, how much of solids each patient should excrete. Women according to height, weigh from ninety to one hundred and eighty pounds. Reference to abnormally lean or stout women is not included in these extremes. Many women do not even weigh ninety pounds, yet they are perfectly healthy. Then again there are very many women who weigh over two hundred and fifty or over three hundred pounds. Such extremes

of body-weight are disregarded. The amount of solids voided by healthy human beings, as stated before may be assumed to vary from five hundred to eleven hundred grains daily, according to body-weight. Thus the woman weighing ninety pounds ought to pass five hundred grains, and the woman weighing one hundred and eighty pounds ought to excrete eleven hundred grains of urinary solids. It is an easy matter to estimate the amount of solids that women of intermediate weight should void.

Various working formulæ exist for estimating solids. It is understood that all solids of the urine are thus included. Innumerable articles have appeared in the past on the methods of estimating urea. The topic under consideration includes not only urea; it includes everything solid. The formula herein recommended is known as Haines' modification of Haeser's method.

Its simplicity and speedy solution relieve it of all the objections belonging to all formulæ relating exclusively to estimating urea. It is this: *Multiply the last two figures of the specific gravity of the urine by the number of ounces voided in twenty-four hours and the product by $1\frac{1}{10}$.* Thus: If the amount of urine voided in twenty-four hours be 36 ounces and its specific gravity be 1021, the formula would read 36 times 21 times $1\frac{1}{10}$ equals 831, the number of grains of solids contained therein. These figures can be obtained at once upon measuring and taking the specific gravity, and the amount of solids can be calculated without a moment's delay. This estimate includes urea and all the other solids. Should we wish to estimate the amount of urea separately, that is quite another matter, requiring time and delicate chemical manipulation. This advantage exists in favor of estimating the amount of solids, that if there is insufficiency there is unquestionably a deficiency of urea existing also. In a large practice where such calculations are made daily, sometimes several in one day, the item of time-saving is an important one.

Renal insufficiency is extremely common. It is encountered in every period of life. Unquestionably we all suffer from it at times, as is indicated by nervousness, dyspepsia, bronchitis, neuralgia or in some women by comparative amenorrhea.

Urinary solids are a lethal poison when retained in sufficient quantities. The amount of poison in human urine required to kill is secreted by healthy persons in two and one-sixth days. Like other poisons their effect depends upon dosage; if the dose be small the effect is inconsequential; if large

the effect is more serious; if very large the victim succumbs. Any person with renal insufficiency may be considered as one who has retained urinary solids in his blood where they can produce their effect with precision. It is a matter of daily observation that we see gynecological patients with renal insufficiency who present amenorrheas, neuralgias, pelvic peritonitis, dyspepsias, bronchitis, cutaneous eruptions, headaches, backaches, leucorrhœa, nervousness, insomnias, etc. Properly treated with diuretics and the usual gynecological therapeutics such patients are relieved much more quickly than when diuretics are not employed.

Bouchard, through his numberless experiments has recounted many curious facts concerning the toxicity of urine. The poisonous action of urine excreted by day during the period of cerebral activity produces a different effect from that excreted during sleep. Day urine is more poisonous than night urine. It causes convulsions. Night urine causes coma. Man elaborates two and one-fourth less poison during sleep than during an equal time of cerebral activity. Transfusions of urine lower temperature.

We often encounter subnormal temperatures in gynecological patients who present renal insufficiency. Such toxicity produces depression of the activity of the thermic centre in the medulla. Depressed temperature retards tissue metamorphosis which in turn increases auto-infections.

Urea is diuretic. Its absence as seen in hepatic diseases is accompanied by a cessation of functional activity of the kidney even when that organ is healthy. Thus we see when the substance urea—the *bête noir* of physicians—is absent abnormal conditions follow. To kill a man of 132 pounds weight requires one pound of urea. Such a man manufactures 302 grains of urea daily. Therefore to be killed by his own product of urea it would require 19 days of non-elimination. This substance constitutes one-seventh to one-eighth of the total toxicity of urine. Uric acid is very feebly toxic because it is made in far too minute quantities. The gouty man can have many hundreds of grains of urate in his deposits without being intoxicated by it. Creatin and creatinine possess only a small degree of toxicity. The coloring and other organic substances removed by charcoal filtration contribute at least one-half of the toxic power of urine. Decolorized urine must be used in double quantity to produce toxic accidents. Have we in this fact an explanation of the evil effects of renal insufficiency?

iciency so frequently encountered in patients who pass large quantities of very light colored urine?

Leucin, tyroxin, taurin, xanthin, hypoxanthin and guanin produce scarcely any result in toxic experimentation. Hippuric acid can only become toxic in quantities formed by the animal in ten or twelve days and is therefore considered very feebly poisonous. Ammonia is toxic, but in a fraction which escapes us. The conclusion is reached that urea, together with the coloring and other organic substances removed by charcoal filtration contribute about two-thirds of the total toxicity of a urine. What constitutes the other one-third? There remain only the mineral substances and to them the remaining third of the toxic action of urine belongs. These are composed of earthy salts, the salts of potassa and the salts of soda. Earthy salts comprise only one-seventh of the mineral substances and are practically non-toxic because of the difficulty in maintaining their solubility in the blood plasma. Therefore as toxic agents they may be disregarded. The salts of potassa; the chloride, the sulphate, the phosphate and the phenylsulphate constitute one-fourth of all urinary mineral substances. They are very toxic. The chloride of potasstum is the most poisonous. All salts of potassa are fatally destructive to unstriped muscular fibre. Therefore in sufficient quantity they arrest heart action. In renal insufficiency there is produced an accumulation of mineral substances particularly potassa. Hence we find, among uræmic phenomena, in certain conditions, a preponderance of the action of potassa, which may represent two-thirds of the total toxicity instead of one-third.

The salts of soda possess only a feeble toxicity. It is only exceptionally that they play an important part. Thus it will be seen that Bouchard's experiments teach us that in the toxicity of urine, urea and the coloring and other organic substances supply two-thirds and potassa one-third of the totality of the phenomena causing death. Such a death is said to result from *uræmia*. It is preceded by the appearance of chronic or paroxysmal nervous accidents, as cephalalgia, dyspnoea of the Cheyne-Stokes type, coma, convulsions, associated with disturbances of calorification and other symptoms of the pre-uræmic period. Urinary poisoning shows itself especially in the nervous system.

It is not yet incontestably settled what other tissues are affected by it especially. Four years ago Bond (*Amer. Journ. of the Med. Sciences*, September, 1891) attempted to show that

serous membranes are liable to take on inflammations in patients with renal insufficiency. He would see in the patient who has recurrent attacks of pleurisy one who retained too much urea. Confirmatory of this idea are the recurrent pleurisy so often encountered in the patients who die of chronic nephritis. Similarly we meet with many patients who have repeated attacks of bronchitis, with profuse secretion, produced by renal insufficiency. Even their breath, in many cases, has a urinous odor, indicating that such patients are trying to excrete urinary solids through the pulmonary mucous surfaces. Such patients are always, and never otherwise, cured by the supervention of free urinary excretion, spontaneous or induced. Many persons cannot take cold without suffering temporary renal insufficiency, which in turn causes a bronchitis or a diarrhœa. Who does not know the superb effect, in such cases, of Dover's powder, with its powerful diuretic action, or of sweet spirits of nitre, in small hourly doses?

On the nervous system we have unquestioned evidence of the deleterious effects of urinary solids in the production of the various neuralgias. Lithia and small doses of mercury quickly remove the hyper-accumulation and the neuralgia disappears. Mucous membranes respond very decidedly to the continuous or to even the intermittent dosage of renal solids. Proof of this is seen in the serious diarrhœa of uræmia, where the patient may be said to be attempting to urinate from the intestinal mucous surface. Gastro-duodenitis illustrates the same fact concerning too much uric acid remaining in the system. Unquestionably the same idea is seen carried out in contributing to the perpetuation of *chronic perimetritis* so often encountered, for it is a simple clinical fact that the administration of stimulating diuretics in cases presenting this condition constitutes one of the most powerful adjuvants to other treatments.

In the class of renal insufficiency cases herein referred to, we do not see our patients die. We witness only the minor effects of urinary toxicity. For illustration, divide fatal toxicity into ten parts. The vast majority of the gynecological patients with renal insufficiency, may be said to have retained in their systems four, five, six or even seven of the ten parts of the fatal amount. What symptoms do they present? Always those referable primarily to the nervous system; because lethal urinary poisoning shows itself at its close in coma or convulsions. Long before coma or convulsions are seen, an interesting array of minor nervous manifestations is exhibited. Some are mild, some severer, some are very severe. We encounter

these same symptoms all through our practice in the old and young of both sexes—indeed a large share of a physician's life is spent in getting rid of such symptoms. Such patients have neuralgias, bronchitis, dyspepsia, cutaneous eruptions, headaches, backaches, leucorrhœas, nervousness, insomnia, etc., etc., it is no uncommon thing to meet with such symptoms in women who have suffered from them for years. The removal of the renal insufficiency in them cures these symptoms most satisfactorily. There is an immense deal of satisfaction in seeing a properly administered diuretic remove from a renal insufficiency patient an amenorrhœa, or a sacralgia, or an oophor-algia, or a pleurodynia or a dyspepsia or bronchitis, that has resisted the routineal gynecological treatment.

Patients suffering from renal insufficiency should be regarded as poisoned patients and treated accordingly, for they are cases of veritable uræmic poisoning. They present symptoms varying in intensity according to dosage. Women passing only fifty per cent. of the normal amount of urinary solids are extremely numerous. It is simply astonishing to see how common renal insufficiency is in gynecological cases. Women passing not to exceed four hundred grains of solids daily present various degrees of nervous irritability. When the amount is lessened to, say, three hundred grains or less daily, the condition of nervousness becomes a very serious and logical factor. Let a patient passing only the latter amount of urinary solids take a severe cold and she will develop a bronchitis, or a severe neuralgia, or a fresh attack of perimetritis, or a pleurisy, or some other malady equally grave. When the solids are diminished still further, as to two hundred grains in twenty-four hours, we shall find the nervous system so seriously invaded that our most solicitous attention is demanded. And with the amount still further diminished, say, to one hundred grains of solids per diem. our patients will be found dangerously near the verge of uræmic convulsions, the condition not infrequently found in the last weeks of gestation.

What are the evidences that certain tissues are invaded by urinary solids that they present symptoms that are to be associated with renal insufficiency? It is difficult perhaps to answer that question dogmatically. To give an unassailable reply involves a chemical analysis of the tissues presenting symptoms that may be alleged to arise from urine poisoning, that has not been made so far as our reading extends. I am not aware that the pelvic peritoneum, or a bronchial tissue, or nerve that presents urgent symptoms in a case of renal in

sufficiency, has been examined by a chemist and declared to contain urinary solids. Therefore the *experimentum crucis* may be said to be wanting. Yet notwithstanding this deficiency, we shall, till such chemical analyses have been made, be compelled, from a clinical standpoint, to associate very many urgent symptoms with the existence of renal insufficiency. Synthetically, however, we have a great amount of proof that the urinary solids *do* produce symptoms in certain tissues, and that is the therapeutics. For, if appropriate diuretics are used in such cases, it will be found that the excretion of urinary solids will be increased, thus indicating that they are called in from the tissues that do not contain them normally, and at the same time the urgent symptoms subside.

To illustrate: Mrs. C., multipara, presented, in addition to a marked general metritis associated with a deep, double laceration of the cervix, an obstinate bronchitis with profuse secretion. The cough produced such violent succussion of her pelvic organs that her metritic symptoms were intensified, in the way of pain and greatly decreased ability to go about her daily duties. Vesical irritability and increased leucorrhœal discharges added to her general misery. Soon her digestion was deranged, and a degree of anæmia supervened with its train of nervous symptoms. Cold weather brought on bronchitis, from which she was comparatively free during the summer. Winter after winter she had been an invalid, submitting to gynecological treatment fruitlessly. She had spent the winter season in southern France, in Italy, in Spain, in Cuba, only to find invalidism return upon coming home. At length the modern treatment of dilating, curetting, and operating on the cervix came to us, and she passed successfully through that line of procedure with the result of a vast improvement in her general condition. Still the advent of winter developed her bronchitis, which was followed by bladder-distress, leucorrhœa, and gradual running down. Not till the second winter after the operations mentioned were the kidneys questioned. It was found that two hundred and ninety-eight grains only of urinary solids were passed, when she ought to have voided eight hundred and fifty grains. This discovery was made in 1890. She was at once put upon a stimulating diuretic, tonics, and a laxative. In thirty days her urinary solids were increased to nine hundred and fifty grains, the cough had entirely disappeared, and she was on the high road to recovery. After March 1st she had resumed her social obligations, every old symptom had dis-

appeared, and she reached a degree of health that she had not known for years.

The only explanation of the cure of this patient is to be found in the removal of the condition of renal insufficiency. The bronchial mucous membrane was apparently attempting to play the part of the kidneys, and the irritating quality of the sputum perpetuated the cough. The vesical mucous membrane, irritated by the acrid character of the urine that was passed, as well as by the violence of the contractions of the abdominal muscles in coughing, caused the irritability of that viscus. The increased leucorrhœal discharge could be produced by the vicarious attempt of the endometrium to discharge urinary solids in its imperfect way, aided by the continual engorgement of the uterus incident to the sudden and violent retardation of the venous blood-flow that always accompanies the effort of coughing.

CASE II.—Miss G. aet. 23; had menstruated only five times in the previous year. She had backaches and headaches, circumpelvic pains increased by exercise, an albuminous leucorrhœa and great nervousness. The ascending colon was loaded with feces. She should have voided eight hundred and fifty grains of urinary solids daily but she passed only four hundred and eighty-five grains. In other words her daily passage of urine solids was almost four hundred grains. A very aggravating element in this case was the impacted colon. Putrefactions in such a condition of the intestine are very noxious. They increase urinary toxicity very considerably. Conversely, suppression of intestinal putrefactions always diminishes urinary toxicity. Bouchard showed in 1882 that the alkaloids of putrefaction which are very poisonous, increase in a parallel manner in the feces and in the urine. Nothing is better shown today than the parallel relation between the increase of indican in the urine and indol in the feces. This patient presented one other symptom that I have often encountered, viz: a urinous odor of her breath. Evidently she was poisoned by the urinary solids or by what would be urinary solids if they had passed through the kidney.

Treatment consisted of laxatives and diuretics. Her urinary solids were increased to over 1,300 grains for a number of days. She continued the use of the remedies till regular menstruation supervened. As soon as an insufficient amount of the solids again appeared the comparison amenorrhœa returned. A recurrence to diuretics again made her monthly sickness appear regularly. Eventually I instructed her how

to calculate the amount of her own urinary solids, supplying her with a urinometer and a graduate, and to employ the remedy for their deficiency. In this patient there was no pelvic malady to account for her amenorrhœa—a fact more forcefully illustrating the bad systemic effects of renal insufficiency.

CASE III.—Mrs. B., aged 36, the mother of three children, the victim of many abortions, with no cervical nor perineal laceration of pathological interest, complained of pelvic-weight, general rachialgia, tender spino, pleuradynia in left chest, excessive nervousness and moderate menorrhagias. She had a moderate metritis. Both broad ligaments were free with no uterine ankylosis. She weighed 154 pounds and should have passed nine hundred grains of urinary solids. She had gastrointestinal fermentations. She had refused a needed dilating and curetting to a number of physicians, restricting their gynecological therapeutic exploits to local treatments and tampons, which comprised the full extent of their treatment of her. Her urinary solids weighed only four hundred and seventy-eight grains. Local treatments, tampons, lithia, and a tonic cured her in four months. Her urinary solids were kept above 1000 grains daily for many weeks. Renal purgation—if such an expression is permissible—seemed to be absolutely essential to her recovery.

Similar illustrative cases could be multiplied almost indefinitely. The vast majority of gynecological cases refuse operative procedures. The majority of physicians are incapable, from environment and needed training, of performing gynecological operations. They are restricted to office consultations and treatments of such manner. If they will add to their therapeutic armamentarium, in cases demanding it, an array of effective diuretics they will be surprised to see many otherwise refractory cases improve or regain good health, upon paying due and needed attention to renal insufficiency.

No intimation is here given that it is the most important factor in disease of women. To set up such a claim would be most absurd. The aim of this article is solely to call attention to one line of treatment that has been all but universally neglected heretofore, and to invite observations and original investigations.

There is the gravest reason for thinking that a very close relation, even that of cause and effect, exists between renal insufficiency and pelvic disorders. The developmental phase of the renal and generative organs constitutes that reason. Embryologically these two sets of important organs arise from

the same source. The mesoblast in the ovum gives rise to the muscles, bones, circulatory and lymphatic systems, the urinary and generative organs. From this fact it becomes an easy matter to infer that derangements in one set of these organs can produce, in a reflex way, if you please, or at least are very frequently associated with, derangements of the other.

Since observation shows the numerous cases of coexistence between renal insufficiency and neuralgias, mucous-membrane disorders and serous-membrane inflammations, one cannot but question the possibility of this insufficiency producing or permitting amenorrhœas, dysmenorrhœas, leuchorrhœas, and attacks of pelvic peritonitis. It is strongly emphasized that the position is *not* assumed that all cases of these disorders are produced by renal insufficiency, but, from the fact that many of them are relieved by including in the treatment remedies that increase the urinary solids, the conclusion cannot be resisted that cause and effect actually exist between many of them and the deficiency of urinary ingredients.

The *autophakoscopie* is a small instrument by which a person can see for himself and watch the progress of the spots visible in the eye which the cataract is invading. It is described with twenty-two cuts in the *Ann. d'Ocul.*, September, 1895, but has been rejected by oculists who do not approve of the patient studying the evolution of his trouble.—*Jour. Am. Med. Ass.*

The English editor appreciates a good idea even though it may emanate from the columns of one of the smaller American journals of medicine. In a late issue of the *British Medical Journal* there appeared a lengthy and favorable review of the "Symposium" on the marriage question offered to the readers of the CORPUSCLE in its issue of February.

Medical common sense is a most excellent thing for the laity to possess. The following from a country newspaper is a remarkable example of its lack: "Mrs. Henry Ramsier is lying very low. Rupture of the heart, which terminated in consumption is the cause." We wonder if she is going to die.

The Post Graduate medical school has sold its present building to the College of Physicians and Surgeons and will erect a new five story school edifice at the corner of Twenty-fourth and Dearborn street to be occupied this fall.

LECTURE IN PEDIATRICS.

BY PROFESSOR COTTON.

Reported Jan. 28, '96, by R. W. Holmes M. D., Registrar of clinic.

This morning we will take up for consideration the subject of the examination and general symptomatology of infants.

In examining adults we may proceed, *seriatim*, with the cardinal methods of physical exploration; we may obtain valuable information also from subjective symptoms through the patient's own observations.

For obvious reasons this is not possible in the case of infants and young children. Yet this absence of subjectivity is, at times, an advantage which you will appreciate early in practice when you are confronted by the whims of the hysterical or garrulity of the hypochondriacal.

Bear in mind constantly the timidity of children. Remember, also, that the little sick one may be restless or irritable and resent the approach of a stranger. Before entering the presence of the little patient if he is awake when you call, have the child stripped, wrapped in a blanket and lying on the lap of his mother or nurse. Do not permit the clothing to be removed in your presence for the child will realize that you are there in his interests and resent it. When you appear in the room talk to those about you, apparently paying no attention to the child and yet watching carefully the while, noting the general deviations from the normal. As the eye passes over the child from head to foot you will note any abnormality in the cephalic contour, any unusual configuration of the face, any facial expression suggestive of disease or malnutrition. You will perceive if there be some deformity, either congenital or acquired. The gestures may be suggestive of some disturbance, and the cry may give a clue to your diagnosis. The patient should be in a clear light but one not bright enough to affect the eyes.

As the child becomes accustomed to you notice his toys, approach tentatively, get him interested in you. When the opportunity presents itself, make a "winged shot" in the parlance of the hunter, using such method of examination as is possible. When possible examine the patient sleeping, as much valuable information may be obtained from symptoms which would be distorted or obscured by psychic impressions when awake.

I must here strongly urge you to study the *infant in health*. Observe the normal apparent disproportion of the several parts of the body. Observe that the head is large and do not, from this fact, make a diagnosis of hydrocephalus. Do not make the grave error of calling the large liver a hypertrophic cirrhosis.

A healthy infant should have a rotund outline, round full cheeks, well rounded gluteal regions, legs well covered with subcutaneous fat and the skin should be of a rosy tint.

You will quickly see if there be due relation between the head, trunk and extremities for that period of life.

Respiratory action should be observed, if it is normal, accelerated or retarded. Its character, as to whether thoracic or abdominal, superficial or deep.

Obtain the pulse rate, its ratio to respiration. In infancy and childhood the ratio is as three or three and one-half to one. In adults as four to one. You will bear in mind that the ratio of pulse to respiration is easily disturbed.

You will observe the color of the skin, whether it be hyperæmic or anæmic, if there be a rash or any pigmentation. You will take either the rectal, axillary or inguinal temperature, keeping in mind, however, that elevations of temperature are easily produced in infancy and early childhood. High fever is not always portentous of grave changes.

Configuration of the head, the character of the fontanelles if they are normally patent or closed, elevated or sunken, should be noted.

When it is impossible to obtain the pulse rate by contact at the radial or temporal arteries in an infant from whatever cause, whether on account of restlessness or due to the superficial character of the beats you may count the pulsations at the anterior fontanelle.

The position of the legs if they are normal in relation to the body or strongly fixed upon the abdomen, will fix in your mind the possibility of abdominal disturbances.

You will learn much from the language of the face. The older physicians were wont to lay great stress upon this but with the progress of the study of pathology less attention has been given to this as a diagnostic aid. The older writers divided the face into three parts or diagnostic areas. Changes above the infra-orbital line denoted cerebral disturbances. That part of the face between the infra-orbital line and the upper lip was declared to give expression of thoracic involvement. Below the upper lip the mouth and chin often showed

gastro-intestinal or abdominal derangements. This classification is worthy of much thought but you must not depend upon it exclusively for without due consideration of the other signs and symptoms you will often be misled and possibly make serious mistakes. In passing, I might say that it is of greater value in acute inflammatory processes of the three great splanchnic cavities. In the first division, corrugation of the skin of the forehead denoted cephalic trouble, as in some headaches of adults. Headaches in infancy are ominous of serious disorder of the nervous system. Gastro-intestinal disturbances do not often produce cephalalgia in infants as is so frequently demonstrated in adults. In health the pupils are rather contracted during sleep yet they readily react to the changes in the intensity of light. An unequal dilatation of the pupils is always suggestive of some intra-cranial pressure or inflammation. In the same category may be classed widely dilated pupils which do not react to light or but sluggishly. Impending death is often indicated by a non-contracting pupil or irregular dilatation. Photophobia when not explained by ocular or conjunctival diseases is strongly suggestive of intra-cranial troubles. There may be deviations from the normal axis of vision or we may see nystagmus, sometimes the precursor of convulsive siezures.

The second division of the face, namely, between the infra-orbital line and the upper lip, give monition of thoracic disturbances. The nose is of the greatest import in this division. With the patulous nose and a normal respiratory area we breathe through the nostrils without any participation of the alæ. When we are called to a little patient and see the alæ nasi rising and falling with each respiratory excursion our minds are immediately directed to the possibility of some faulty æration of the blood. This embarrassment may be due to a variety of causes, as breathing vitiated air or there may be an improper expansion of the lungs, either an atelectasis which may be congenital or a compression due to tumor or enlarged mediastinal glands, laryngeal stenosis as in diphtheria, croup or laryngismus acute inflammatory processes of the bronchi or bronchioles, as in pueumonia or bronchitis. The frequency of the respirations, the depressed supra-clavicular spaces, the shallowing of the vertebral and vertebro-costal ribs with the condition of the nose, aid us much in determining the seriousness of the pulmonary involvement. The cheeks early show the effects of respiratory interference by the cyanotic hue or the dull flush so common in pulmonary inflammation.

The remainder of the face will aid us often in making a diagnosis of gastro-intestinal derangements. In the latter class of cases we often meet with the peaked chin and drawn mouth and instinctively seek the abdomen as the site of the disease. The color of the skin will often tell us much. A healthy baby will have a rosy, pinkish hue. An anæmic infant will have a pallid skin. Inspection of the face to ascertain the amount of blood is uncertain and often deceptive. The only sure way to ascertain the quality of the blood is by examination with the hæmoglobinometer and hæmocytometer. To illustrate the unsatisfactory results obtained by inspection you will all recall the little boy recently presented to our clinic with chronic intestinal indigestion. His cheeks were rosy, his conjunctiva were red, apparently normal in color and yet the hæmoglobinometer showed a percentage of forty-two degrees hæmoglobin. In children as in adults with thoracic diseases we see a red tinge or cyanotic hue to the skin due to the circulatory obstruction. In patients with renal diseases, especially of chronic character, we observe a peculiar waxy pallid color. We also perceive the effects of faulty elimination in a muddy complexion.

The motions of an infant are of service in diagnosis. When the hands are continuously pressed against one ear, we may look to see if there be an otitis. If that is eliminated, we may receive intimation of a meningeal inflammation. The hands may be kept to the mouth and we infer that hunger or an intestinal change is causing the trouble. The restless jactitations previously mentioned will suggest some neurotic disorder.

The face has also been divided into an upper or neurotic, a middle or sanguineous and a lower or phlegmatic portion. A well developed frontal bone and calvarium, in fact, the skull as a whole, well developed denotes a marked capacity for intellectual development or one of a high strung organization. The middle portion of the face does not so clearly bring out the peculiarity of the lungs and heart, yet you will see traces of the sanguineous temperament in this facial area. A well developed nose and the prominence of the cheek bones suggest a sanguineous personality with its tendency to rapid tissue change. Lastly, a full chin, broad jaw and thick lips show a phlegmatic temperament, a developed stomach and liver.

The infant's reflexes are highly developed and the earliest in the appearance of all nervous phenomena. In fact, a baby

is but a bundle of reflexes with deficient inhibition. The baby during the earliest months of life does everything reflexly, from drawing the milk from its mother's breast to the evacuation of its bladder and bowels, with all the concomitant cries, gestures and movements it may possibly perform in its restricted existence. Convulsions in infancy are due to this high reflex activity, and irritation at some center, wherever it may be, abdominal, thoracic or intra-cranial, produces an explosion of general reflex movements—a convulsion.

It is important for us as physicians to do all in our power to prevent convulsions, for such severe nervous excitement can have but a deleterious effect upon the delicate mechanism of an infant. When you are called to see a baby and find it with eyes deviating from their normal axis, irregular oscillations rotating upward under the upper lids, be on the watch, for such movements denote impending changes of the nervous system. Remember convulsions in infants, whether from central or peripheral excitation, may be produced by apparently the most trivial causes or may be the result of profound pathological processes.

SPRING COURSE IN CLINICAL DIAGNOSIS, BACTERIOLOGY AND PATHOLOGY.

In accordance with the custom established in the spring of 1895, the Pathological Laboratory of our college proposes to give a special course of laboratory instruction in clinical microscopical diagnosis, bacteriology and pathology, commencing May 4th next and lasting four weeks. The course is planned for practitioners and advanced students. It comprises in reality three distinct courses, but the time will be so arranged that participants can take all the courses if they desire, and this would seem to us to be a very wise plan for all who can avail themselves of the excellent opportunities that the laboratory now offers. The set courses will occupy the forenoon of every week-day from 8 to 12 o'clock. The CORPUSCLE sincerely hopes that very many of the alumni of Rush Medical College will find it convenient to attend these courses. The month of May is commencement month. There will consequently be many features of interest presented during this month, and surely the profit of this course, together with the interesting college exercises and functions, and the great college clinics, will make this an exceptionally advantageous time for a visit to Chicago. The maximum attendance upon any single course is limited to fifty. Further information will be furnished by the clerk of the college.

A CHICAGO MEDICAL STUDENT'S ASSOCIATION.

The suggestion made by Professor Dodson at the beginning of the school year, that it would be well to establish certain undergraduate societies the object of which would be the broadening of student life and purpose; the formation of a glee club resulting from this suggestion; the article by Mr. E. F. Burton upon a "Rush Medical Club" in the February CORPUSCLE; the formation of an inconspicuous, but still important "instrument club"; the creation of a second Greek letter society, and the formation sometime previous of an athletic organization, all seem to be attempts to express the need of student organization for one purpose or another, and of the encouragement of a social life broader than the routine of lectures and recitations. It is in the belief that a full discussion of the subject is desirable at the present time, and that such discussion is likely to result in some far reaching undergraduate movement, that the following suggestions are added to those already made by others.

The social status of the medical student is somewhat peculiar. His permanent interests bind him closely to the home from which he comes and to which he purposes returning, while his attachment to his temporary home is transitory and insecure. And on the other hand, the people of the city in which the school is located, wrapped up as they are in the interests of their own community, feel no deep social concern aside from that arising in business, in the medical student. Thus it happens that the circumstances of the student and the interests of the citizen both tend to bring about a real social isolation. And while it may be possible to overcome this separation to a limited extent, yet, because it results from irremediable natural conditions, its existence will in the main always continue. The replacement each year of students who graduate by others who come to take up precisely the same life and relations, has the effect of maintaining this student body as a permanent portion of the community, although individuals give place each year to other individuals.

Moreover, the essential purpose of the whole body of students—the acquirement of a medical education—is identical. The undergraduates of any particular locality constitute, therefore, a compact body in the community, permanent as to existence, not in close sympathy with its surroundings, and having almost precisely identical purposes. If any collection

of men in the world at large fulfilled similar conditions of isolation, permanence, and unity of purpose, the inevitable outcome would be organization for mutual welfare. Every country and city, every church, every working man's union, and to bring the example nearer home, every medical society, illustrates the principle. It is a matter for wonder that medical students have waited so long before organizing. If one were to look for the reasons for this inaction he would probably find them in part, first in the transitory character of the student life; second, in the immaturity of the student, and his want of sufficient financial means; and third, in a lack of sturdy independence of thought and action arising from a too implicit dependence upon the "faculty." It is hard to disassociate the idea of a medical faculty from that of the faculty of a school, or literary college. The governing body of the last attempts some sort of paternal oversight over the undergraduate; it aims to throw about him a healthy moral and physical atmosphere, and may even assist in his living arrangements. The medical faculty assumes no such oversight. It merely furnishes opportunity for medical study, and admits no responsibility for the student outside of school hours; and since it grants diplomas only to men of "good character," tacitly assumes that the student can with the help of friends take care of himself. It is quite probable that this attitude might in some particulars be altered if circumstances permitted; but lack of endowment and the greater interest of physicians in their profession than in the affairs of medical education render the establishment by the schools of such institutions as gymnasiums, libraries and dormitories often an impossibility. The student should realize this difference between a literary college and a medical school. The first assumes him to be hardly yet a man and looks after him in all his relations, the latter whatever be its attitude within the college walls, leaves him in all external relations to battle for himself. Therefore, while the medical student may look to the school or the individual members of its boards, for helpful sympathy and co-operation, he should understand clearly that in the main he must work out his own social problems.

Realizing then that the student body will always be a distinct portion of the community, that it is united in purpose and that it can expect from the faculty but a limited amount of aid in developing plans for its social welfare, let us consider its wants and how far co-operation might help to attain them. The student needs as much of the home which he has aban-

doned as possible. Shelter, food, and pleasant home surroundings, and in addition, clothing, books and instruments, the use of a library, full opportunity for medical study, means for gaining bodily exercise and social intercourse, and profitable and pleasant employment for his leisure; and all at a small cost. Were competent persons to study the best means of satisfying these requirements, under the existing conditions, plans would certainly be developed whose execution would bring greater comfort, a broader education, improved morality and lessened expense to the mass of students; and the chief means, it is safe to say for the accomplishment of this improvement would be co-operation through organization.

Mr. Burton in the February CORPUSCLE points out two crying needs of the undergraduate of Rush College; first, opportunity for social intercourse outside the walls of the school; and second, the use of a medical library. These deficiencies are too obvious to require discussion and they are probably the chief nuclei about which student organization should arrange itself. It is not too much to say that the highest type of medical education is impossible without at least a working library near at hand. To satisfy these needs Mr. Burton would establish a club of advanced students, members of the faculty and alumni, who would have private club rooms with a library and would debate current medical topics. That such a club would be useful is true; but that it would leave the main problem hardly at all advanced toward solution is also true. It is inconsistent to point out a universal need, and then, as a remedy, present a plan whose execution would benefit only a chosen few. The need of social advantages and of the use of a library are as pressing upon the lower class men, indeed upon every man, as upon those selected as members of this club; and the freshman would probably receive more benefit from social opportunities than the senior. The usefulness of exclusive societies is unquestioned, and their multiplication in medical schools is to be encouraged; but they, altogether can never satisfy the social needs of the whole undergraduate body. The time is coming when even our literary colleges, with all their smaller societies will have one college club freely open to the membership of every student of the institution; and it is such a club that will come nearest solving the social requirements of Rush College. One suggestion made in the article under discussion would probably on second thought not be sanctioned by either faculty or student body, i. e., the idea that the Allen library or any library under the control of

the faculty, should be granted for the use of any exclusive undergraduate society.

While, therefore, Mr. Burton's plan is excellent in itself as the nucleus of a limited club, its scope is too narrow to satisfy all the requirements. Its essential ideas, however, could be expanded to conform to the conception of a society comprehensive enough to more nearly include the needs of the whole student body. Such an organization as that about to be outlined might perhaps be called "The Chicago Medical Students' Association."

In the vicinity of the Cook County Hospital are two "regular" medical colleges beside the Woman's and the Post Graduate, the last of which however is soon to be moved to the south side. The students in each of these two colleges have come from the same homes, are here for the same purposes, possess the same characteristics and attainments, undergo the same social isolation, and will upon graduation, become equally capable practitioners in the same profession. The two student bodies are socially a unit and the fact of study at different schools is socially unimportant. Moreover, much the same student problems present themselves at both colleges; and union for social purposes would be wise on both sides. The medical student fraternity working together would constitute a body influential enough to accomplish much more than could possibly be accomplished by the divided efforts of individual schools; and fraternal co-operation between students of different colleges would be as broadening, as free from conflicts, and as mutually beneficial as the co-operation of the members of the faculties of those schools in medical societies and in actual practice. Good character and the fact of medical study in one of the schools co-operating should form the only limitations to membership. Members of the faculties and other physicians would of course be heartily welcomed; but it is important not to make the mistake of attempting to satisfy two constituencies; the association should always remain distinctly a student's organization. Questions as to the admission of schools in other parts of the city or of schools which may hereafter be built on the west side or of individuals under especial conditions, need not now be discussed.

Of all the benefits which organization should aim to secure probably the most important is the use of a medical library. No interest of the medical student approaches in importance his main business, the acquirement of a medical education; and no merely social need concerns him nearly so much as a failure

in the means for carrying on his studies successfully. Grouped about the County Hospital are twelve hundred "regular" students, constituting with the schools, a center for medical education of great importance, and one which is constantly enlarging, and yet no medical library facilities exist near enough to be practically useful. The great need of a west side medical library is felt strongly by both teacher and student. The schools individually will probably for years be unable to fully supply the deficiency; and it would be an unfortunate waste of resources for them individually to attempt what could much better be done together. Suppose a strong students' organization, with the breadth of membership suggested, were able to offer facilities for housing and caring for a library, the schools could by co-operating with it not only secure much needed library facilities but would in doing so be relieved of the responsibility and expense of establishing individual collections. The library of such an association would aim to possess merely a practical working assortment of medical books and periodicals, and would need to be developed nearly as completely along the lines of general as of medical literature for it would aim to be not merely a professional tool, but also a source of recreation and general improvement.

With the establishment of suitable rooms containing the nucleus of a library, the association would have advanced a long step toward satisfying the social needs of the student fraternity. At first the distinctly social features might consist simply in the informal meetings of individuals within the club rooms which would become general student headquarters. Even at the start, however, provision could be made for a meeting room for the accommodation of small societies, which might be organized for different purposes, as for example, a debating club as suggested by Mr. Burton. Student societies already formed (the glee club and athletic organization for example) could be accommodated in a similar manner. The student living at a distance would find the club rooms useful as a place in which to spend odd hours.

As the association became firmly established it would inevitably, as the embodiment of student opinion, take on a larger usefulness. It would become a center for reform and improvement. Its spirit would be that of helpfulness to the social body it represented. The freshman, coming unacquainted to Chicago would for example, be aided in all possible ways to become comfortably settled; and many other offices of a similarly helpful character would be undertaken. The asso-

ciation might become the purchasing agent of the student, by which books, instruments, clothing, etc., could be reduced in price, the possibility of which has been demonstrated in other institutions, and by the "instrument club" of Rush College. It would study the problem of living, and might establish a dining room and build a dormitory. It is possible that the promise of profits in the latter might be the means of securing capital for the erection of an association building. A gymnasium would be a possibility, and other useful features might be added as occasion demanded.

The great importance of such an organization in full operation will be readily appreciated; and the practicability of its establishment is by no means visionary. The writer has not studied the financial side of the undertaking thoroughly, but it can be safely said that the beginnings of such an organization would be less expensive in proportion to the membership than for a smaller club; and at the same time, the outside support would probably be more substantial. The colleges would find the following practical reasons for granting aid; first, the association would remove from their shoulders the problem of establishing school libraries; second, it would ultimately increase their student enrollment; and finally it would benefit the undergraduate morally and intellectually and so add to the usefulness and reputation of the colleges. The physicians of Chicago, especially of the west side and the alumni of the schools living outside of the city, would contribute at least in a small way. Students could devise profitable entertainments. Fees, other contributions and profits from dining room and dormitory would have to supply the balance.

The general conviction that a social organization of some kind should be undertaken will, it is to be hoped, result in some action without unnecessary delay. But haste in the beginning is neither necessary nor desirable. A clear conception of what is to be done has proven itself requisite to success in many less difficult undertakings. A thorough discussion of the whole subject is strongly to be desired. In order to put the matter in concrete form, the following suggestion (subject to the substitution of a better one) is offered. Let the presidents of each of the Rush College classes, together with a member of the faculty of its own selection, choose an alumnus of the college, living in Chicago and not connected with the school, to help to form with them a preliminary committee to consider the whole question of student organization; let this committee have full power to add to its own members; and let it prepare

a report to be presented to the school at the opening of the next college year.

The greatness of the future of Chicago in medicine, as in every branch of its activity, is hard to conceive. The establishment today of any institution which is to have a permanent existence, acquires a greater significance in the light of the future growth of the city. Started modestly at the present time such an institution may grow to great importance. It is strongly to be hoped, therefore, that the question of student organization will not be handled in a narrow manner. Modest beginnings built upon a broad conception, may possibly result in a future organization of unforeseen breadth and usefulness. It is possible to conceive "The Medical Students' Association" of the future as consisting of several branches in different parts of the city, each corresponding to a medical educational center and all co-operating to make the life of the student broader, stronger and altogether more satisfactory.

E. L. KENYON, '96.

A project is on foot to have Rush represented in the annual to be issued by the students of Lake Forest University. In view of the fact that the "Pulse" of '97 has been abandoned the plan is most commendable, and every effort should be made to bring it to successful realization. With an abundance of excellent material and the best of talent at our command, something unusually interesting and characteristic could easily be prepared. It is to be regretted, of course, that our own annual is not to be issued, but as such seems to be the case, "half a loaf is better than no bread." The students of Rush certainly can make that half loaf exceptionally fine in quality if the matter is vigorously pushed.

A German statistician, Bernhard Ornstein, has computed that Greece stands in the first rank among European countries in the number of centenarians. He attributes this to the climate. (*N. Y. Med. Times.*)

The law concerning alcoholic and narcotic habitues in the state of Connecticut permits such patients to voluntarily commit themselves for one year to any institution established by the laws of the state. (*N. Y. Med. Times.*)

For the removal of small filiform warts situated upon the face, Dr. Comtrell uses scissors and then touches the base with lactic acid.—*N. Y. Med. Times.*

The Corpuscle.

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RUBY RED AND BLACK: Colors of Lake Forest University. ORANGE: Color of Rush Medical College.

Corpuscle Election.

Fred. Barrett, '97, has been elected to the editorial board of THE CORPUSCLE.

Dr. Tinen.

This month we present to the readers of the CORPUSCLE the likeness of the late Dr. Edward H. Tinen. Dr. Tinen was an ornament to the medical profession and a man of exceptionally brilliant parts. He bore an irreproachable moral character and was beloved and admired by all who were so fortunate as to claim his friendship. In the following pages will be found a brief biography of the deceased, kindly furnished us by his class-mate, Dr. E. R. Le Count.

Disturbance in the Halls.

After a short season of comparative order in the college halls, recitation and lecture rooms, the spirit of hilarity, bubbling over with desire for fun and frolic has again burst forth with renewed vigor among the students. Almost daily there may be witnessed between lectures and recitations tremendous rushes engaged in by rival classes. These exhibitions of animal spirits result in the destruction of furniture and clothing to say nothing of causing numerous bruised heads and limbs. To witness the meeting of two classes, one coming from the recitation rooms on the fourth floor of the laboratory building and the other coming up the stairs, is almost blood curdling. At times a man may be seen to shoot up into the air and why some one has not been hurled over the rail to fall to the floor some thirty feet below, Providence alone can explain.

This desire for fun and recreation in men in the health and vigor of youth is perfectly natural and cannot be subdued. There are times when men, old men or those in the prime of

life must needs give way to what may be termed their animal natures. Thus prisoners of war simply from an uncontrollable desire for action, becoming crazed from continual inactivity assault their guards and commit unheard of deeds—deeds out of all the bounds of sense and reason. After this outburst and after the thirst for activity has been quenched they immediately return to their sensible selves and settle down to the humdrum of their lives, becoming as calm and peaceable as ever. So it is with the pent up student of medicine. To make two classes consisting of some two hundred students each file by each other, knocking elbows as it were, without some demonstration is almost an impossibility. Order of this kind may be established for a short time but it can scarcely be expected to be permanent.

The question which immediately presents itself is "What is the remedy?" Certain antagonistic conditions exist and the only way to create harmony is to bring about the separation of these antagonistic elements. In the college building by using both front and rear entrances, the front for the incoming and the rear for the outgoing class, collisions could, in most instances, be avoided. In recitations in the laboratory building, if the classes were dismissed five minutes before the end of the hour and students not allowed to enter the hall from below before the hour, it would seem that these disgraceful and dangerous scrimmages might be avoided. These plans may not carry but we simply offer them as suggestions hoping that some remedial measures may be taken before serious accidents result.

Edson's
Aseptolin. Simultaneously with the discovery of the Roentgen Ray have the papers brought to our notice the work of Edson, of New York, who claims within the past few weeks to have successfully treated tuberculosis by means of hypodermic injections of a combination of a 3 per cent. solution of phenol and a 1 per cent. solution of a philocarpin salt to which he has given the name "Aseptolin."

Through the agency of Aseptolin he asserts the ability to successfully free the system from the destructive bacillus of tuberculosis. His methods of procedure are in the main a repetition of experiments made by one DeClat, who we understand was a homeopathic physician of Paris about twenty years ago.

DeClat used a solution of phenol, hypodermically, with apparent success and later his methods of treatment were pursued in this country for a short time only to have the "wave of

reaction overtake them and drown their hopes" which were buoyed up by his extollation. Methods of local treatment by direct injections of iodine, carbolic acid and creasote into the pulmonary tissue have been tried but have never gained the approval of the medical profession.

So Edson's ideas are not original. They are simply modifications of past and unsuccessful experiments.

Inhalations as treatment for tuberculosis have previously been resorted to and have accomplished nothing except to relieve the catarrhal conditions present in the larynx, trachea and bronchi. The beneficial effects of inhalations are consequently limited, and do not extend beyond the second or third division of the bronchi and do not reach the seat of infection.

Austin Flint stated that about 25 per cent. of the patients who were afflicted with tuberculosis recover and that those who *did* recover were usually the ones who took the least treatment. It is a clinical fact, as observed by specialists, that patients afflicted with tuberculosis are a hopeful class of patients, and as a rule improvement is marked in their physical condition as a result of pursuing a new line of treatment no matter *what* that line may consist of. And it is safe to state that upon this fact alone does Edson at this early date base his claims as to the efficiency of "Aseptolin."

It has been the experience of the best physicians that it is impossible to state that a cure of tuberculosis has been effected in any case within less than two years after beginning treatment.

Is Edson's mode of treatment the proper procedure?

Physicians have ascertained that in the case of patients confined in insane hospitals, and also subjects of tuberculosis but dying in after years from some intervening disease, that a tonic, nutrient treatment had been pursued; substantiating the advisability of such constitutional treatment.

Kasperek, by dividing the sciatic nerve of one limb of a rabbit and permitting the other limb to remain intact, then inoculating the ear of the rabbit with streptococci, observed that the limb in which the nerve was severed soon became the seat of great trophic disturbances while the sound limb was unaffected by the inoculation, demonstrating the importance of maintaining the nutrition as a fortification against infection.

While there can be no objections to the introduction of antiseptics in any manner in the treatment of tuberculosis, yet experience teaches that antiseptics given by the mouth in

gradually increasing doses are more liable to produce the proper results.

It does seem therefore that administration of antiseptics hypodermically in treatment of tuberculosis, the dose of which must necessarily be small cannot, even in the proper length of time, have to its credit the cures which Edson *now* claims for it.

Expired Air and Ventilation. Recent investigations concerning the composition of expired air and its effects upon animal life which have been made by Drs. J. S. Billing, S. Weir Mitchell and D. H. Bergey and published in the Smithsonian Contributions have led to conclusions which are likely to give rise to some discussion. The contradiction of certain long accepted views are of importance and will be of special interest just now to the Rush class in hygiene. They are substantially as follows :

It is very improbable that the quantity of organic matter contained in expired air is sufficient to produce deleterious effects upon men who inhale it in ordinary rooms. There is no peculiar organic compound which is poisonous in the expired air of men and animals, the injurious effect of such air appearing to be due entirely to the increase of carbon dioxide or to the decrease of oxygen, or to a combination of these two factors. Bacteria are contained in expired air only in the act of coughing or sneezing or other very violent expiratory acts and not during ordinary quiet respiration. The minute quantities of oxidizable nitrogen compounds contained in the human breath appear to be largely due to the decomposition of organic substances constantly going on in the mouth and pharynx. The cause of the unpleasant odor which is perceptible to most persons in passing from the outer air into a crowded unventilated apartment is unknown; but it may be due to volatile decomposition products from persons having decayed teeth, foul mouths, or certain digestive disorders, and is undoubtedly partly due to volatile fatty acids given off with or produced from, the excretions of the skin. Excessive temperature also has much to do with it. The air in inhabited rooms has many sources of contamination beside the expired air of its occupants. Chief among these are dusts of various kinds. These dusts contain micro-organisms, among them those producing inflammation and suppuration, and it is probable that they are the only really dangerous elements in this air. The effects of reducing oxygen and increasing carbon dioxide appear, to a certain degree, to be the same whether the change has been

produced by the natural process of respiration or by artificial mixture. The results of experiments upon animals which were made to breathe air vitiated by the products either of their own respiration or by those of other animals, make it very improbable that there is any peculiar poisonous compound in the expired air of animals or man other than carbonic acid.

If the temperature is very high or very low it has a decided effect in the production of asphyxia by the increase of carbon dioxide and the decrease of oxygen. At high temperatures the respiratory centres are affected, at low temperatures the consumption of oxygen becomes greater and the demand for it greater. The proportionate change in the amount of oxygen and carbonic acid in poorly ventilated churches, theatres and schools has not been found sufficiently great to account for the discomfort which many persons experience when subjected to such conditions; nor is there evidence to show that the higher death-rate in crowded and unventilated apartment houses is in any way dependent upon the change in the normal proportion of these gases produced there. Tuberculosis and pneumonia are the diseases most prevalent among persons crowded together in unventilated rooms. But these diseases are due to specific infections, and their greater prevalence among such persons is in all probability due to the greater liability of such rooms to become infected with the specific germs that cause them.

From these facts, however, we are not to conclude that the old standards of air supply for ventilating purposes are too large. The results of investigation indicate that some of the theories upon which the present standards are based are without foundation or doubtful, and health and comfort depend upon preventing or disposing of dusts, upon regulating temperature and moisture, and preventing the entrance of poisonous gases, rather than simply diluting to a one per cent. solution of carbonic acid.

Success in Examinations. A noticeable, but perhaps not distinctive, feature at Rush is the frequency with which examinations are held. The surprise of the Freshman at the regularity and constancy of the written quiz is merged into a haggard weariness as the Sophomore finds the tests increasing in number and severity. Whatever may be the objections to the system—and students who are surfeited are prone to see them—it is a necessity at our college. The individual standing of the members of so large a body of students can best be determined by

oft-repeated examinations, varying in severity as the circumstances may dictate. The system finds justification also in the fact that it indicates a determination on the part of the faculty to raise the standard of Rush to a point beyond all questioning by competitors. We may well be proud of every advance our school is making, but it must not be forgotten that as her requirements increase, our endeavors to meet them must be commensurate. If a custom of frequent and thorough testing is observed as one means by which Rush is to attain greater excellence, her students to maintain a high standard for themselves and to further the true interests of their college, must study carefully those requirements and principles upon which success in examinations depends.

The question, therefore, becomes at once important. How may this success be attained with certainty?

Two elements are concerned in the answer. First of all, of course, is the matter of thorough preparation. For certain and gratifying success this is essential. But it is not all that is necessary. Preparation may be perfect and yet success not follow. "There's many a slip 'twixt the cup and the lip," and there are many possibilities of failure between the time the student enters the examination room, and the moment he hands in his paper, even though his understanding of the subject be fairly complete. In other words certain contingencies may arise during the examination hour against which the student must be guarded. The second element in our answer therefore concerns the *process* of examination.

To be more explicit: there are the possibilities of error through omission. Time may be short, owing to the length of the questions, and in the effort to cover all the ground, an entire question may be omitted inadvertently. This frequently happens, and though due solely to nervousness, the victim gets credit for ignorance. A question may be so worded as to suggest at once *one* prominent fact as the answer. This takes such complete possession of the mind that other points, equally essential, are lost sight of for the time and omitted. It may happen that the error is discovered on checking up—if time is allowed for such a procedure—but more often several hours elapse before the realization comes that an omission has been made. There is the possibility of reading the question wrong, and thereby giving unwittingly an answer which is incorrect. The questions are hurriedly glanced over; perhaps a word or group of words catches the eye by reason of some peculiar suggestiveness dependent upon the student's expectancy, and

instantly some point upon which the lecturer placed particular stress comes prominently before the mind. Our student congratulates himself upon his preparation for the "catch question"—for such he rashly concludes it to be—and in his overweening confidence fails to note a modifying clause and sets down the answer—wrong. His failure shows that the impetuosity of certain knowledge needs the balance wheel of cool self-possession. There is also the possibility of the powers of thought being crippled for the time through panic. When the idea of failure is presented suddenly to the over-confident student in the midst of an examination a mental disturbance results which clouds the brain and renders good work impossible until the condition is thrown off. There are other contingencies which may lead to disaster concerning which we need not speak. No doubt every student has experienced at one time or another their unhappy effects, and can testify to the fact that completeness of knowledge is not the only element necessary to success in examinations.

How, then, may these unpleasant possibilities be avoided? By removing their cause. They result invariably from the nervous tension peculiar to the occasion. Don't get excited and the process of examination will be devoid of an element exceedingly dangerous to unqualified success.

A tramp of the genuine "Frayed Fagin" type was once asked how he managed to get along in the world so smoothly when his manner of living was so at variance with all the laws of thrift and respectability. He replied that he avoided trouble by keeping his eyes open, his head cool, and his mouth shut. Unconsciously he gave utterance to a rule of conduct capable of universal application and worthy of universal consideration. To no one is its value greater than to the medical student when examinations are concerned. Better work would be done and many disappointments would be saved, if after thorough preparation each would remember the simple injunction of the tramp: "Keep your eyes open, your head cool, and your mouth shut."

Cook County We have heard lately a considerable talk about
Class. discontinuing the Cook County Hospital Quiz Class. We can not speak with authority as to how the faculty as a body stand on the question but as individuals they have various opinions on the subject.

Were all the medical colleges to enter into an agreement to discontinue such classes it would be no injustice to any one

institution; but for one to discontinue while the others may use redoubled efforts is unfair to its students.

Much can be said both *for* and against such a system. We are told by those older and more experienced in educational work that "cramming" for examination is not conducive to the best educational development. But such a course is seemingly made necessary by the manner of conducting the competitive examinations. It is granted that the filling of one's memory with answers to a lot of "catch questions" is often worse than useless, but that is the only ammunition that can bring down the coveted bird—and the bird must be had.

Were it possible to secure a body of students as applicants who had prepared themselves to the best of their ability for their profession with examinations as incidental terrors, a selection based upon questions bearing upon subjects that a thorough student and a good doctor ought to know would result in a set of internes whose ability and practical preparation would be highly satisfactory. But at present, conditions are not so, hence we are presumptuous enough to advise the continuance of the Cook County quiz class until a more satisfactory plan can be devised which will not leave our students to the mercy of unfair competition with other colleges or private quiz classes supported by the moneyed students alone.

Errata. It is the intention of THE CORPUSCLE to treat its contributors fairly. However, as in the case below, mistakes in an article are quite frequently due to the copy. The last sentence in the second paragraph on page 120 of our last November's issue should read—"The bacilli developed outside the body, and introduced after development, are possibly not the germs which do the mischief direct, but they generate a crop of germs, which, when abundant and sufficiently developed may by their industry cause such changes of tissue as will present the typical typhoid fever symptoms."

Resignation of President Coulter. We are sorry to have to note that Doctor Coulter has resigned the presidency of Lake Forest university to take the chair of botany in the University of Chicago. During the short time that President Coulter has been at the head of Lake Forest great progress has been made in all the various departments of the university in every way. By the inauguration of advanced educational methods and by his marked executive and instructive ability he has shown himself to be one of the foremost educators of the day. Though

Rush is not so intimately associated with the president as are some of the other departments of the university it is nevertheless a matter of no little importance to us who holds that office; and we fear that a man will not easily be found to efficiently fill the office whose duties President Coulter has discharged with such pre-eminent success.

The last of the series of lectures given by President Coulter to the Rush students on "The physical Basis of Life," will appear in next month's issue of THE CORPUSCLE.

Roentgen's X Rays. Almost every day makes some new development in the technique of controlling and utilizing the wonderful Roentgen ray. It is dangerous to predict what may yet be its possibilities in the realm of practical surgery. Already in the city of Chicago its practical value has been more than once demonstrated. Dr. Burry, of this city, is to be congratulated upon making the first successful use of the ray for surgical purposes in America. At a recent meeting of the Chicago Medical Society photographs taken by Dr. Burry were exhibited and the method of using the Crook tube demonstrated. Several negatives were made while a paper was read giving an account of the discoveries of Crook, Faraday and Levard which led up to Professor Roentgen's discovery, the developments made in the use of the ray by physicians and electricians in this country, and discussing its probable future possibilities. Great interest was manifested by the several hundred medical men present. Doctors who had doubted the value of the unknown ray in diagnosis were brought to believe in the importance of the discovery for surgery. Dr. Senn said that as an addition to science its possibilities were infinite. It would evidently become the duty of the surgeon of the future to call in experienced electricians in the diagnosis of certain cases. Dr. Church of the Northwestern University Medical school said that the discovery was on the threshold of development whose range of possibilities could not be predicated. He believed that within a reasonable time internal organs could be investigated the difference between tissues of diseased organs known to exist could be recorded on the sensitive plate. Dr. Burry said: "It does not seem impossible that with a more intimate knowledge of these rays some means of controlling them, as is the case with all other known rays, will be found. It may then appear that the varying changes in health and diseases of the soft tissues, as shown by the shadowgraph, will become known, and in this way a cirrhotic liver may be differentiated from a normal one or pulmonary tissues in pneumonit-

is from normal tissues. Certainly, calculi of the kidneys or gall ducts should be easily disclosed. It is not improbable that the pathological changes in the bone tissues can be shown as well as foreign bodies that may be imbedded in these bones. Fractures through the shafts of the bones are usually easily recognized, but those near joints are sometimes difficult to diagnose. This difficulty would be easily overcome by the Roentgen ray."

The first employment of the ray in the realm of practical surgery in this country was in locating a bullet hidden in between the carpal and metacarpal bones of a man's hand, thus rendering it accessible to the surgeon. A successful operation was performed in which the bullet, before undiscoverable, was extracted. Since then a sarcoma growing from the medullary substance of the shaft of the femur has been located and successfully removed. In this case the "shadowgraph" showed absence of dense bony tissue in the affected portion of the femur, thus indicating its replacement by a tissue more easily penetrated by the ray.

So far as locating dense foreign bodies in the soft parts or interference with the continuity of bone, whether from fracture or from replacement by tissue more easily penetrated by the ray, is concerned, we may look upon that as no longer a mere possibility but as a demonstrated fact. Yet our knowledge of the ray and its use is still in its infancy, and the imagined possibilities may never be realized. The soft tissues are so easily penetrated by the ray that much more delicate and exact management must be secured before even normal types of widely different structure can be distinguished. And the distinguishing of slight, or even great pathological changes lies far beyond even that. It lies with the electrician to develop these things. If he succeeds in obtaining results of sufficient accuracy and of broad enough significance, it remains for the surgeon to apply them to his practice; and if such results are ever realized they will certainly be of inestimable value to the medical profession and to suffering humanity. Wonders have already been accomplished. To still greater wonders we look forward.

Spelling in Ability to spell is to some extent an index of early
Examinations. education. This being the case it would seem that the preliminary training of some of our students had been sadly neglected. One needs but to look over the examination papers of even the Rush students to become, if not already, heartily in favor of advancing still higher the requirements

for admission to medical colleges. The orthography of some of the students is indeed something appalling, that is if their examination papers may be taken as a criterion. It would seem that everyone should be able to spell correctly the names of the important diseases upon which they expect to be questioned. But such is not the case. For example in grading but fifty papers written at a recent sophomore review examination the word phthisis was found misspelled nine different ways as follows: thisis, ptysis, pthises, phtisis, pthisis, ptisis tysis, phthisis, and tiesis.

Had a record been kept while marking the remaining two hundred and twelve papers, there is no telling what interesting facts might have been revealed.

A medical college is not the place to study spelling but this seems a good opportunity to advise at least more attention on the part of the students to this important matter. A habit of close observation when reading should be cultivated. In this way a perfect mental picture of each word is obtained and long retained. Thus many mistakes can be avoided.

Professor Bevan made his first appearance in the lecture room after returning from his wedding trip Monday, Feb. 17. Being desirous of showing their interest in the professor's new relations, the whole two hundred and fifty students of the junior class marched single file down into the arena and congratulated him by a hearty hand-shake, which spoke more eloquently than words the sincerity of their action.

The class had sent to Dr. and Mrs. Bevan at the time of the wedding a beautiful clock, of which the doctor spoke in appreciative terms.

The laboratory work in sophomore chemistry closed Feb. 21, after a very successful course of ten weeks. Examination of urine, and testing stomach contents received special attention. It is probable that this course of urinalysis has never been excelled in this or in any like institution in the country. Everyone seems to be well pleased with the work accomplished. Dr. Haines has in view several additions to the "Practical Hints" distributed to the class, and we are able to announce that as soon as ready the revision will be published in the CORPUSCLE. An important feature among the changes contemplated will be a modification of the Haines' test solution for quantitative use.

Alumni Department.

JOHN MILTON DODSON, A. M., M. D., EDITOR.

MEMBERSHIP IN THE ALUMNI ASSOCIATION OF RUSH MEDICAL COLLEGE is obtainable at any time by graduates of the College, providing they are in good standing in the profession, and shall pay the annual dues, \$1.00. This fee includes a subscription to THE CORPUSCLE for the current year. This journal is the official organ of the Association.

Dues and all communications relating to the Association should be sent to
JOHN EDWIN RHODES, M. D., Sec'y and Treas., 34 Washington St., Chicago

There is no one fact which can evoke in the human heart more of keen suffering and helplessness than to learn that Death has struck down youth.

And when that youth has joined to it exceptional natural endowments, when a full preparation has been made in early manhood for a useful career, and when the future is full of brilliant promise, our grief is made more poignant.

Such are the feelings of all who have learned of the death of Dr. E. H. Tinen. It is seldom indeed that a better preparation for the life of a physician is made by a medical graduate, and only infrequently do we meet with instances which assure a future as bright as was his.

Edward Harold Tinen was born in Peoria, Ill., Sept. 1, 1873. His mother died in 1876 and his father when he was 13 years old.

He graduated from the high school in Peoria in 1888, shortly after which the remaining members of his family moved to Chicago. At one time he contemplated becoming a civil engineer, and began the study of electricity with that in view. This, however, was abandoned for medicine, and he matriculated at Rush in 1890.

In 1893 he graduated, receiving the Benjamin Rush medal awarded to that one passing with the highest grade in every branch of medicine required that year for the degree of M. D. Honors came easy to him for, taking the competitive examination for internship in the Cook County Hospital, he again obtained highest honors.

His duties in the hospital as interne were entered upon immediately after graduation in the spring of '93, and terminated the fall of '94. The same zeal and attention to details were

bestowed upon his work there as had marked all he had previously done.

Leaving the hospital in the fall of '94 he left Chicago for Europe Nov. 15. One year was spent in Vienna and Paris taking post-graduate courses in different branches, all of which were intended to better him for the practice of internal medicine.

He returned to Chicago Dec. 15, 1895, full of enthusiasm and new ideas, with the intention of opening an office, and during all the extra time which comes to all young physicians at first, of occupying himself in some original or research work.

He became sick with typhoid fever Jan. 13, and in spite of the close attendance of his medical friends and careful nursing, death occurred after an illness of 17 days, on Jan. 28.

Dr. Tinan while a student was assistant in the chemical laboratory, and at different times was employed in the services of Drs. Brown and J. B. Murphy.

During his internship he held the position of instructor in chemistry at Rush Medical College, and during his last six months in the hospital he was chief of internes. He possessed that faculty of intuition which discerns a truth when only half revealed, and to those so fortunate the acquirement of knowledge becomes no task.

Affable and cheerful, he was always thoughtful of the feelings of others, and made friends with all. All who knew him spoke well of him, and many men his seniors in years and experience, with position and name attained, stood ready to assist him to the best of their ability in his career as a physician and student.

The sadness of the friends he leaves will not be alone that another friend, associate, colleague or brother worker is missing, but that so many possibilities in a useful life have thus been cut short.

E. R. LE COUNT, M. D.

On the 5th of November, 1895, Dr. I. J. Bennett, Rush '81, died at his home in Loyd, Richland county, Wis., where he had lived since 1888. Dr. Bennett was very successful in his practice. He was a man characterized by great charity and a self-sacrificing disposition. He was stricken down in the bloom of manhood, his sickness being brought on by repeated exposure while attending to the wants of his patrons. We extend full sympathy to the bereaved family in this their hour of trial.

College Notes.

ATHLETICS.

—The baseball outlook for Rush for the season of '96 is exceedingly promising, and under the management of Frost, '96, candidates for positions are at present in training at the west side Y. M. C. A. gymnasium. As soon as the weather permits practice will take place on the grounds of the National League. The management has secured the use of these grounds until the first of May, when they will be used by the National League teams. We are informed that material is at hand for a phenomenal team and if the candidates will attend conscientiously to training, we may hope for brilliant results. In behalf of the management we desire to urge all men who have played ball to present themselves at the gymnasium ready for work. Every man will be given an impartial trial. Great credit is due the men who are giving time and energy to the cause of athletics at Rush and to them is due the support of each and every student.

We are pleased to announce that many games will be played on the home grounds thus giving the students opportunity to see games, appreciate the work of the team and lend their encouragement which will certainly be highly appreciated. A western trip through Kansas, Nebraska, Missouri and Iowa is at present under advisement and if necessary dates and financial arrangements can be agreed upon the trip will be taken late in the season.

The following schedule has been arranged: Armour Institute, Chicago, Apr. 4; Northwestern Law School, Chicago, Apr. 11; Illinois Cycling Club, Chicago, Apr. 15; Lake Forest University, Chicago, Apr. 18; Chicago University, Chicago, Apr. 21; Rockford League, Rockford, Apr. 23; University of Wisconsin, Madison, Apr. 24; Beloit College, Beloit, Apr. 25; Chicago University, Chicago, Apr. 28; Northwestern University, Evanston, Apr. 30; Lake Forest University, Lake Forest, May 6; Knox College, Chicago, May 7; Purdue University, La Fayette, May 8; Northwestern University, Chicago, May 12 or 14; Notre Dame University, Notre Dame, May 15; Beloit College, Chicago, May 16.

In addition to the above several other games have been arranged for which the date has not as yet been determined upon. There will be two games with the University of Illin-

ois, one in Chicago and one in Champaign, a return game with Madison, together with practice games with high school teams during the latter part of March and early part of April.

We most heartily congratulate the management upon their promptness and success in procuring so complete a schedule and entreat the students to show their appreciation by constant attendance at games where a lusty use of the vocal chords will not be amiss.

THE MANDOLIN AND BANJO CLUB.

In the last number of the CORPUSCLE we called attention to the musical organizations which have lately become such interesting and attractive features of student life at Rush.

The Mandolin and Banjo Club has a membership of over twenty men, whose talent and experience marks thus early the success of the organization. With dilligent application there is no reason why the Rush boys should not fully equal their Eastern brothers. Their increasing enthusiasm in the work fully assures the realization of the fondest hopes.

Mr. E. T. Jones is director of the club. This young gentleman is qualified both by education and experience for the very important position he holds. For three years he played in the club at the University of Notre Dame, where he also sang in the University quartette.

Monday evening, Feb. 24, the club played at the Cook County Hospital. They rendered two numbers in a very pleasingly acceptable manner. The trio of mandolins did acceptable work, while W. C. Rucker, by his reading, and J. F. Byrne, with a solo, delighted the audience.

A series of concerts are being arranged for the near future, the first of which will probably be given at the college. It is the duty of every loyal Rush man to lend his patronage and influence in furthering the success of the occasion, which will certainly be a great treat sandwiched in among the realties of medical life. In this connection it might be well to add that the Bohemia Club has extended an invitation to the Rush Club to play before them. This is a compliment that may well be appreciated.

In our next issue we hope to be able to give a complete list of the members belonging both to the Glee Club and the Banjo and Mandolin Club.

—Wednesday evening Feb. 26 the Alpha and Beta Chapters of the Phi Rho Sigma fraternity banqueted the Gamma chapter at the Leland Hotel.

Dr. L. C. Weeks, one of Rush's most popular instructors has left the college and Chicago to take charge of a practice in Red Wing, Minnesota. Dr. Weeks graduated from Rush with the class of '93, afterward serving eighteen months as interne in Presbyterian Hospital. During and since that time he has been instructor in anatomy and physiology and demonstrator in practical anatomy. He has shown himself a thorough student and in every way a gentleman. He was popular with the students who worked under him and they will feel his loss. We take pleasure in recommending Dr. Weeks to those among whom he is to practice in the future.

—Saturday evening Feb. 29, the following men were initiated into Nu Sigma Nu fraternity; E. F. Burton, '97, J. R. Crowder, '97, A. F. Stevenson, Jr., '98, R. W. Webster, '98 and Howard McBride, '99.

—Dr. L. H. Prince will give a private course in practical obstetrics during the summer months. For information regarding the work the doctor may be seen on Tuesday mornings at nine o'clock in the laboratory building or address 1348 N. Halsted St.

LOCATIONS.

FOR SALE.—A medical practice worth \$3,000 a year and also a drug store and stock of drugs and residence. No opposition. For further particulars, address,

S. D. SLEDD, Box 49, Nine Mile, Indiana.

WANTED.—Physician with established \$5,000 a year practice, with view to retiring, wants active young doctor (Allopath) for partner. A fine opening for the right man. Address at once with references,

L. B. ROBERTSON, Adrian, Mich.

A German-American physician is wanted in a wealthy German community ten miles north of Davenport, Iowa, on the C. M. & St. Paul R. R. Address,

A. W. BOWMAN. M. D., 214 Brady St., Davenport, Ia.

A physician is wanted in Washington, Neb. For particulars address,

MORRISON, PLUMMER & Co., Marshall Field Bg.

Being desirous of moving to a city I have a splendid village location for some young physician desiring to locate in the south. Have a house of ten rooms, splendid barn, land and other property worth \$2250.00. Address,

M. M. SMITH, M. D., Cedar Chapel, Tenn.

WANTED.—A physician in an incorporated town of 350 people. Address, J. A. WIDNEY, Alpha, Ill.

I have established a sanitarium at Mt. Clemens, Mich., and desire communication with a good, live, final year man.

DR. S. S. STEVENSON, Mt. Clemens, Mich.

Please place me in correspondence with a man wanting a superior location. W. A. WISEEAN, Camarga, Ill.

I wish to sell my place here. Three hundred dollars cash will buy rig, office fixtures, instruments. This is a town of four hundred people. has two railroads and is surrounded by a fine country. The roads are mostly gravel. □There is no other physician here. W. G. VANCE, M. D., Finden, Ind.

I desire an assistant in the person of a young physician who speaks the Swedish language. To the right man I can give a good opening, but *must have help soon*.

DR. T. J. AVERY, Hiteman, Ia.

This is a place of 500 people, is situated in a fine farming community and has two railroads. I have a small drug store and a good practice of which I wish to dispose. There is practically no opposition and returns on business will be immediate. W. F. CARVER, M. D., La Otto, Ind.

There is a good location for a young doctor at Calman, S. D. For particulars address,

C. S. GERALD, M. D., Calman, S. D.

Anyone desiring a good location please correspond with me at once. I have something of interest.

N. E. HEWITT, M. D., (Rush '89), Stark, Kan.

I will give up my practice to anyone who will buy my office furniture, which will amount to about \$200. I have two nice office rooms furnished *rent free* by a drug company of this city. Population of the town 15,000. C. W. HARRISON, M. D.,

200 W. Borroque St., Pine Bluff, Ark.

A doctor that wants a good practice in town of five hundred write to MILLER & CROW, Sadorno, Ill.

A fifteen hundred dollar practice for sale cheap. Correspond *at once* with J. K. GRIFFIN, M. D., Meredosia, Ill.

Would be pleased to communicate with anyone desiring a location, H. VAN BUSKISK, M. D., Arlington, S. D.

For good location at Campbellsport, Wis., apply to Dr. E. J. Orvis at that place, or to Dr. Wescott, 31 Washington St., Chicago.

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JOHN M. COULTER, PH. D.

The Corpuscle.

RUSH MEDICAL COLLEGE, CHICAGO, ILL.

MEDICAL DEPARTMENT LAKE FOREST UNIVERSITY.

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NO. 8.

THE PHYSICAL BASIS OF LIFE.

BY PRESIDENT JOHN M. COULTER, Ph. D., of Lake Forest University.

(A series of lectures delivered before the classes in physiology of Rush Medical College.)

LECTURE III.—EVOLUTION.

Delivered Friday, Jan. 31. Reported by C. C. Cummings.

Tonight I shall speak briefly concerning the great subject Evolution. It comes naturally into any series of biological lectures because it is the great working hypothesis of biology. No biological work is done today that does not find underlying it the thought of evolution. There is also a very good reason for presenting this subject to this audience, because evolution in its relation to biology is really widespread. Our literature, scientific and popular, is full of it, and there is no theory concerning which there is so much false conception. It seems to be most persistently misunderstood on account of certain loose ideas that have become fastened upon it. It is always wise to do a little missionary work for this theory, and to state definitely what it is. Since in many communities physicians stand as representatives of science, this question will in all probability be referred to you at one time or another.

There are two phases of evolution in relation to biology, though almost every subject is being studied from the evolutionary standpoint. In fact, it seems to be the method of approaching every subject. I think a great many people have the idea that evolution belongs to biology alone. The two phases are the evolution of the individual and the evolution of the whole race of beings. Attention today is more largely di-

rected toward the evolution of the race of beings as a whole, rather than toward the evolution of the individual.

It was through the study of the development of the individual that the word "evolution" was introduced into biology. The first definite statement we find concerning evolution is the statement made by Aristotle and called the theory of "epigenesis." He claimed that the individual originated from a homogeneous mass. There was no differentiation of part in it, and as it developed there was an addition of organ to organ until the mature structure was reached, the idea being that these organs were gradually formed and did not pre-exist. This theory was neglected until taken up in modern times. We discover nothing further until Harvey, whose name is associated with the circulation of the blood. He took up Aristotle's theory and started it upon its modern career. He was able to substantiate it by certain definite observations. Harvey is today considered one of the great founders of modern biology. However, he fell upon troublous times. For some reason the theory was not well received. It seemed to most people at that time to be a statement that was irreligious and opposed to what might be called the dominant ecclesiasticism of the time. There was a stimulation of thought and as a consequence a theory was propounded with reference to the development of the individual to offset this theory of epigenesis as stated by Aristotle and Harvey. This new theory held dominion up to the middle of this century. It is abundant in our literature, and although strangled almost as soon as born, nevertheless, held sway, and I think dominates the ideas of some people yet, and is a hard thing to get rid of. It claims that the germ cell, the egg, of the plant or animal contains every organ to appear in the mature body. These organs are of the minutest size, of course. The process of development of the individual is then merely a process of unfolding of the organs already there; and to this process was applied the name "Evolution." It was commonly stated at that time, and I have seen it in recent times, that if you turned your microscope upon one of these germ cells, you could see all the organs of the future individual complete; and if a microscope still more powerful were used, one could see all the organs of the subsequent generations. Of course, this idea of the evolution of the individual was very soon abandoned after the biology of today began to assert itself. But when we find such illustrious names as Leibnitz, Cuvier and others supporting it, it is no wonder that long life was given to the theory. Of course, the evolution of the in-

dividual is no longer a question of doubt as in the last century. It is a fact of daily observation in biological laboratories everywhere. It is no longer a theory, but a demonstration that the original mass is homogeneous, and that organ is added to organ until the mature form appears. Generally, the more interesting phase of evolution concerns the whole assembly of living things as we find them on the earth. This thought has been in the world ever since man thought at all, and when you go back farther and farther into the history of their philosophising, you will find that it was formerly fixed in the minds of thinking men, that species beget species, just as individuals beget individuals. The thought of evolution, therefore, is no modern thing.

Any statement of evolution today is but taking up, a world-wide and time-long idea. I feel that this statement is an important one, because certain distinguished names of biologists have been associated in the minds of people as authors of the theory of evolution. It is very hard, however, to tell when the modern theory of evolution took form. It has grown up gradually in the minds of men, because observations were made slowly. However, if you can put yourself in the position of the people of the last century with reference to scientific matters, you can understand how their thoughts began gradually to be turned toward the idea of evolution. I shall give you a few of the facts which set men to thinking:

First, the facts of intergradation. I can show what this means by an illustration. Suppose we had spread out before us all of the great genus *Aster*. We have divided them into a hundred and more kinds, called *species*, and given them names accordingly. However, if you saw them all together, it would be absolutely impossible to tell where one species ends and another begins. The whole would seem to be a continuous series and it would at once appear to you that any lines run among them would be purely arbitrary. Dr. Gray was a student of these *Asters* for thirty years, and at the end of his studies said that he knew less about them than when he began. The fact is, and it is a fact you ought to bear constantly in mind, that a species has no entity in itself, but is merely the expression of man's opinion.

Second, the fact of the existence of rudimentary organs. As observation progressed, anatomists began to discover that they were meeting in the bodies of animals organs which seemed to have no significance. There is no need to dwell upon this fact. You know that our own bodies have suc-

examples, one being the vermiform appendix. These organs are called rudimentary, and usually indicate that at sometime, in some ancestral form, they were functional.

Third, the facts of adaptation. A brief illustration will suffice. We have an ordinary plant, with which you are doubtless all familiar, commonly called "smart weed." There is one kind growing in the edge of the water in our pools. The one which grows in the water has a stalk which is perfectly smooth; but suppose the water dries away, you will find a coating of fur or hair putting out all over the stalk; the purpose of it all being to protect the flower cluster from crawling ants. The water surrounds the plant so as to keep it free from invasion, and thus serves the purpose of protection. This is the power of organisms to adapt themselves to surroundings.

Fourth, the fact of the geological record. There is no need to recount to you the succession of animal and plant forms rising wave after wave. The farther back we go into this record, the more strange; the nearer and nearer we come to the present plants and animals, the more and more the resemblance, and finally we see them merging into the plants and animals of today.

Fifth, the facts of embryology. There appear structures in different embryonic phases which do not persist until maturity. These structures belong to forms entirely different and of lower grade. In the development of the human embryo you find strange embryonic phases, closely resembling lower forms.

These facts as they came crowding in upon men's minds speedily led them to be almost certain that there was such a thing as the descending of one kind of plant or animal from another, and that species were begetting species as individuals were begetting individuals. In reference to those authors whose names have become famous, such as Darwin, Lamarck and others, they are not at all the authors of the theory of evolution; but they were among the thinking men who laid hold of these facts and began to present them in a tangible way, and to confirm the belief in the existence of such a thing as the evolution of living forms:

The original mistake of these men, we are just discovering. For instance, it was not very long ago that one who was a follower of Lamarck felt that he was entirely in opposition to one who was a follower of Darwin, so that each one of these exponents of evolution had followers who seemed to be in hostile camps. This came from the fact that each was seeking to

discover but one cause of evolution. We look now upon an organism as a resultant from the interplay of a variety of causes. All the old views had a certain basis of fact, and all are now combined to account for all they can, and we still feel that they are to a certain extent inadequate.

Plants and animals appear in the world in a perfect kaleidoscopic series of forms, being driven along in certain lines by the various forces of which I shall speak in a moment. As a result we find that they are all moving toward the goal of adaptation, trying to adapt themselves to surroundings. It was not long since we were taught that there was perfect adaptation to surroundings. There is no such thing as perfect adaptation in this world. The significance of this statement you will find is a deep one. Suppose every organ was perfectly adapted to its surroundings, there would be no progress. With lack of adaptation we have progress. You will understand that when perfect adaptation comes then equilibrium is reached and progress in any direction ceases. You have not gone into the subject of the human body without having discovered that it is full of what might be called imperfections, so far as the individual organs are concerned.

Men began therefore, to cast about them to find a rational explanation for evolution, and then began the great search for "secondary causes." The beginning of the statement of secondary causes is in 1796-8. The theories of evolution have had a curious history. Statements made with reference to them have fortunately never been made by one man alone, but have been made by two or three simultaneously. The first statement came from three men representing three of the greatest nations of Europe; in England, E. Darwin, the grandfather of the more illustrious Charles Darwin; in France, St. Hilaire; in Germany, Goethe. What impressed them was the adaptation of animals which changed their fur or plumage with different seasons. They believed that they were more or less plastic under changing conditions. The theory of the influence of "environment" in causing variation was therefore stated.

It was in the first quarter of this century that two men made the next epochal statement, Lamarck and Treviranus. Treviranus was simply ignored and Lamarck was laughed at. I suppose there has never been any scientific statement that has brought out such a flood of ridicule as the theory of Lamarck. He kept on working however, and today the scientific world is convinced that his theory is one of the most important. Lamarck called his theory "Appetency", the doc

trine of desire; and when he gravely announced that the long neck of the giraffe was the result of the desire of many generations of giraffes to browse upon tree-tops, and that the hind legs and tail of the kangaroo was the result of the desire of many generations of kangaroos to leap, and so on, of course the world was amused. But the world missed the point. Lamarck had seen that this theory of environment, the only one in the world at the time, did not reach deep enough into the organism. Environment could not affect the changes which evolution demanded. Lamarck, therefore sought to find some deeper cause. He observed that a muscle if used becomes developed and enlarged, and that a muscle not used at all becomes flabby and wasted. He applied this law to all the organs in the body. Those organs which are used become developed, and those disused or neglected become stunted and finally rudimentary or obsolete. His theory then is but the well known effect of use and disuse, and it has its place in every evolutionary doctrine since.

The next epoch makers in evolutionary doctrine were Darwin and Wallace. They were preceded by fifty years of as great barrenness as ever existed in the history of scientific progress. The theory of Lamarck and Treviranus had fallen upon most unhappy times, for scientific thought was dominated by the Cuvier and his school whose influence was simply enormous. Ever since 1831 Darwin had been at work collecting his facts, and it was in 1859 that he and Wallace simultaneously, but independently, made their first statement. It was a curious co-incidence that brought the two statements together upon the same day at the same place. Wallace was at the time in the Malay Archipelago and Darwin in England. I suppose that this theory effected the greatest change in biology ever made. The name Darwin applied to it was "Natural Selection." I can state in a few words what it signifies. Darwin saw, chiefly from the study of animals, a fact which would be even more apparent in the study of plants, that the rate of increase is very high; that even in the case of the animals of slowest reproduction if left alone the progeny would presently occupy the whole earth. When one remembers that most animals and plants propagate very rapidly and that there are three-quarters of a million varieties, more or less, you can easily see that there must result a tremendous struggle for existence. Darwin says that death must be the rule and life the exception; and that for every egg, germ or seed that survives and develops, a million perish unpro-

vided for. That egg or seed which happened to fall into favorable conditions might argue concerning the adaptation of its surroundings to its well-being, but what of the million that perish unprovided for? They also were evidently intended to become plants and animals. Darwin argued that this tremendous waste of life must have some great biological significance. In observing the forms that survive he discovered that they were better adapted to their surroundings. Then the law of heredity says that like begets like, and these more favored forms, differing somewhat from their fellows, transmit their advantage to their progeny; and this favorable variation is handed down from generation to generation, becoming intensified until finally the difference is so decided and permanent that we call the result a different species. In other words nature, like a skillful gardener, selects the best adapted forms, and the means of her selection is this struggle for existence, resulting in what Herbert Spencer calls the "survival of the fittest." This is Darwin's theory of natural selection very briefly stated. It created a great stir in the popular mind, as well as in the scientific mind. Darwin himself was amazed at the way the public took it up. The reason was, he had involved man in this scheme. The opinion seemed to be current that man was too sacred to be touched by biological research. When the dust of conflict had settled and men began to look about them they discovered that after all it was not necessary to become alarmed. The whole thing well exemplified Agassiz's famous statement that "whenever a new and startling fact is brought to light in science, men first say that it is not true; second, it is contrary to the Bible; third, everybody knew it before."

The theory of natural selection is not the last one in the list of secondary causes. One in this country deserves a passing notice. Professor Cope, of Philadelphia, who is one of our most brilliant biologists, has worked out a mechanical theory which he well illustrates by the evolution of tooth structures by the mechanical stress and strain to which they have been subjected.

In closing I wish to speak of Weismann's contribution. He has attempted to explain variation. If you are familiar with Darwin's work you will remember that he takes varieties for granted, but does not explain their origin. If you plant fifty seeds out of the same pod, no two of them will come exactly alike. In many species there is the greatest diversity of form. Natural selection lays hold of this tendency

to vary, hence any theory of evolution must seek to account for variation. Weismann attempts to prove the continuity of the germ plasm, that is, that the reproductive substance is handed down from generation to generation and is never lost in the midst of the most complex structures. This "germ plasm" is the bearer of hereditary tendencies that have accumulated from a long ancestry. Therefore, whenever sexual union occurs and two germ plasms unite the result is to mingle two long streams of hereditary tendencies in a combination which probably never existed before. The resulting organism is therefore never exactly like its fellow. For this reason Weismann sees in sex reproduction a scheme for originating varieties.

The evolutionary problems of today are those of heredity, and in this field we may presently expect great discoveries.

NOTE.—Pres. Coulter asks us to correct a mistake he made in recommending books for those interested in general biology. Instead of Thompson's it should have been T. Jeffry Parker's "Elementary Biology," published by Macmillan & Co.

Do not be afraid to use chloroform all through the period of labor. The heart of the woman at full term is peculiarly adapted to stand it, and extreme pain produces nerve exhaustion, prevents proper recuperation, damages the quality of the milk, retards the removal of debris from the pelvis, and produces the susceptibility to disease germs.—*N. Y. Med. Times.*

TYPHOID FEVER IN MEXICO.—Aroritir in the *Revista Médica* of Jan. 1, 1896, asserts that typhoid fever is becoming acclimated in the City of Mexico, as a few cases have occurred, all quite mild. It seems that until recently it was never encountered by physicians there.—*Journal Am. Med. Ass'n.*

At the Illinois State Penitentiary at Joliet, where upwards of 1600 convicts are confined, typhoid fever is quite unknown. The water supply is derived from deep artesian wells drilled through heavy surface strata of limestone. This pure source of water supply, together with a good system of drainage, accounts for the freedom from typhoid infection. In sad contrast, however, to this exemption from typhoid is the picture of seventeen cases of pulmonary tuberculosis in various stages of progress.—*Clinical Review,*

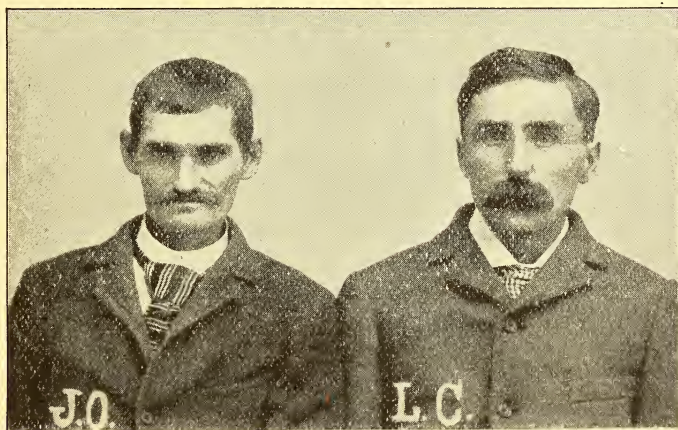
CLINICAL LECTURE ON INSANITY.

BY RALPH A. GOODNER, M. D., Rush '88.

PHYSICIAN TO THE ILLINOIS SOUTHERN HOSPITAL.

Delivered before the Southern Illinois Medical Association at its Twenty-first Semi-Annual Session held at Anna, Illinois, November 22nd, 1895.

GENTLEMEN:—The first two cases that I will present to you I consider interesting, because in many respects they present similar symptoms, yet belong to entirely different forms of insanity. This is L. C., this, J. O., both about thirty-two years of age, farmers, education limited, and of fair physical condition. L. C. has been insane about two years and his mother was insane. J. O. has been here since last April, and has one imbecile sister. I know nothing of his history except what I have stated. We have probably heredity in both cases.



Now for similarity of symptoms; both have delusions of persecution of a religious nature. L. C. says that he has committed the "unpardonable sin," that there is not any hope whatever for his salvation and that his soul is hopelessly lost. J. O. says that he has been a very wicked man, that he is the chief sinner and that his sins have been great and many. Each feels that he is imprisoned in this hospital because of his sinfulness, this being the Lord's punishment. Both are emotionally depressed. Their faces express that fact. There is in neither case any excitation of ideas or emotions. There is no impairment of memory or will-power. On any subject but religion, they speak sanely. Now, gentlemen, so far our pictures

are quite similar and I choose these cases because the same diagnosis has been made in both—erroneously, however.

Now for the dissimilarity; L. C. does not admit any possibility of his soul being saved. J. O. is in doubt, and is constantly debating the question as to his eternal welfare, sometimes feeling hopeless, again hopeful.

There is more depression in L. C.'s case. He prefers to be alone. J. O. is more companionable. L. C. does not think his punishment will atone in any way for his sins. J. O. thinks the punishment will in some way redound to his credit or advantage. This is characteristic of this form of insanity. No matter what they consider the persecution or whom the persecutor, they usually think it will bring them some credit or advantage in the end. L. C. believes himself worthy of his sorrow, while J. O. rather thinks that his punishment is too severe and is more rebellious.

L. C. thinks any one who has sinned as he has would be lost. J. O. thinks he is the chief sinner, is the persecuted of man-kind. Do you not see how his egotism crops out even in his persecutive delusions? L. C.'s conversation on any other than religious subjects is more or less colored by his delusions, but J. O.'s is not.

Now, gentlemen, we come to the physical signs; L. C. has a well shaped head, measuring twenty-two and one-half inches in circumference, well developed frontal region, and symmetry of head and face. J. O. has a head circumference of only twenty-one inches, rather low and narrow fore-head, prominent cheek bones, small ears, protuding lower jaw, and on opening his mouth I find a saddle-shaped palatal arch, in fact, the physical marks of defective development.

L. C. is a case of *melancholia religiosa*. J. O. is a case of *paranoia religiosa*, in the persecutive stage.

This case of J. O. is in a transitional stage. Were it fully developed the differential diagnosis would be a very simple matter, because then they would be exactly opposite types of insanity.

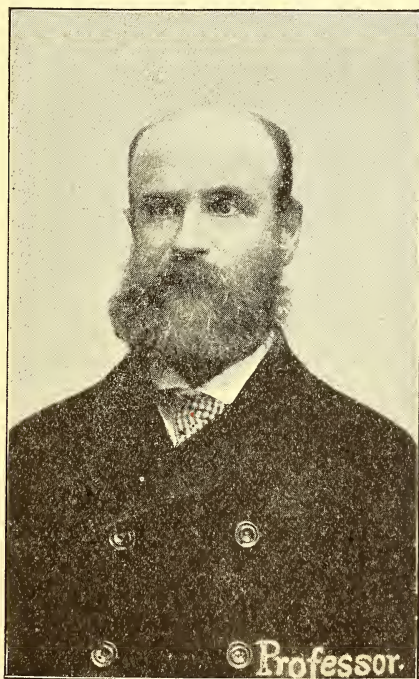
One of these days J. O., because of a visual hallucination, a dream, vivid emotional experience, reading of some passage in the Bible or some fortuitous circumstance, will believe himself to be a prophet, the blessed of heaven, or a Christ. His emotions will become pleasurable, ecstatic.

Gentlemen, before introducing some cases of *paranoia*, just a few words. *Paranoia* is a form of disease occurring in one of a congenitally defective nervous organization, which mani-

feats itself by logical or systematized delusions of persecution and self-exaltation without excitation of ideas or emotions, impairment of memory or volition.

There are infinite types of paranoia. The one I now introduce to you has delusions of both persecution and grandeur. This case is fully developed. This is H. K., a young man with a bright, receptive mind, age twenty-four, admitted only a few days ago, duration of disease four years, always been eccentric. I have no history as to heredity. You will notice he has a poorly developed head, the circumference of which is large enough, being twenty-two and one half inches, but the antero-posterior diameter is out of proportion to the lateral. His frontal development is deficient and out of proportion to the occipital.

The patient has the delusion that he is a second Christ, that he has a mission to perform as yet not known, that will be revealed later.



He is egotistical and thinks he is persecuted by his mother and brother who are jealous of his superior talent and genius, and would much prefer these blessings had been bestowed upon a brother who is now attending the University of Michigan. His delusions are systematized and limited, which should be

the case in paranoia. On all other subjects he speaks intelligently. This young man otherwise is really bright. He completed his education at one of our state normals.

The next case of paranoia is H. F., whom we call "Professor," an appellation of which he is very proud. He is forty-seven years of age and has been here twenty-five years. He was a school teacher. His father was neurotic.

"Professor" has fixed, egotistical and persecutive delusions. I will ask him to tell you what he thinks of himself. Professor—"I am the smartest man in the world and as superior to the ordinary man as man is to the lower animals. I am destined to be the progenitor of a new race, just as Adam was of the people who now inhabit this world, but I have always been persecuted by the witches."

I will ask the "Professor" why he thinks he is persecuted by the witches. I do this to illustrate a systematized delusion, one that is explained and defended. In acute mania or paresis the delusions are unsystematized, and if I ask such a patient the question, "Why do you think you own the world," etc., he cannot give me any plausible reason.

Now, Professor, tell the gentlemen why you think you are persecuted by the witches. Professor—"Well, you see it is like this; the witches have a power over me and will not give me a chance to marry because they fear I will start a new, superior race of people who will be able to cope with and overpower them."

Gentlemen, this case well illustrates one thing Dr. Runge, of St. Louis, told you this morning, namely, one suffering from paranoia, does not usually drift into dementia as do the other forms of insanity, at least, if he does, the progress is slow. This man has been insane twenty-five years and is just the same now as when admitted, so far as mental ability is concerned.

This is H. T., a different type from the preceding ones. This is erotomania, so called, but it is only a form of paranoia. His age is thirty one, occupation teacher, parental aunt insane and father intemperate. He has been here and at Jacksonville a number of years. He is one of those fellows you often see whose egotism finds vent in aspiring to the hand and love of a lady far above him socially and financially. They never become discouraged but think and dream of their loved ones constantly. They are often given to poetry. This man writes letters and poetry to a lady of social prominence, which of course we never send.

If he has any delusions of persecution I have never been able to detect them. Perhaps earlier he did and has lost them, for it is sometimes the case that the delusions of persecution becomes effaced. It was not so in "Professor's" case however, he having retained his twenty-five years.

This is W. R., age twenty-nine, admitted eighteen months ago, always considered peculiar. His mother was insane. He has delusions of persecution only, differing from J. O. in that his are not religious in character. He imagines every now and then that some other patient, usually a quiet, inoffensive one "has it in for him," as he expresses it. He will interpret a whisper or gesture that has no relation to him as inimical and plead to be removed to another hall; otherwise he is bright, active and seemingly sane.

He, as well as J. O., is probably in a transitional stage, and later will develop egotistical delusions. Even now, the attendants tell me, he is inclined to be conceited and feels that he is superior to the other patients.

The next case is C. F. Nothing is known of his history; was a tramp picked up in Fayette Co., and brought here. He says Gen. Grant appointed him commander-in-chief of U. S. army and navy. I show this case because his delusions of persecution depend on an hallucination, i. e., he says his enemies are trying to poison him and he thinks this because he imagines that he tastes the poison in his food, an hallucination of the sense of taste. So much for paranoia.

Now a few words about paresis before I show you some interesting cases. The word paresis has several synonyms, namely, general paralysis of the insane, paretic dementia, dementia paralytica, and in popular language "softening of the brain," although this is a misnomer, because, while it is true the consistency of the brain is less firm, there is never a true necrotic softening. Paresis is a structural disease of the brain, briefly, it is a degeneration of the cortex and a low grade inflammation of cortex and membranes.

It is a disease displaying slowly increasing mental impairment, disorders of muscular movement, disturbances of higher reflex action, physical and mental decay.

The principal causes are syphilis, (three out of every four cases we receive have syphilitic histories) intemperance, excessive venery, indirect physical and emotional causes, and trauma. In other forms of insanity we find ordinarily mental symptoms only, but in paresis we have both physical and mental well marked.

The principal mental symptoms, are delusions of grandeur (although they are sometimes depressive, or the two may alternate) change of character, loss of memory and impairment of volition. The emotions are usually exalted, but they too, may be depressed.

The most prominent physical symptoms are inequality of pupils, difficulties in articulation, inco-ordination. muscular tremors, epileptiform and apoplectiform convulsions, and finally paresis.

The first case I show you is R. R., age thirty-three, occupation brakeman, duration eighteen months, syphilitic, intemperate, Keely graduate, no heredity. These cases usually do not show hereditary histories. They have in most cases well developed heads and brains. There are three stages in paresis: first, or prodromatic, second, or stage of expansive or depressive delusions accompanied by well marked physical symptoms, third, or stage of dementia.

This man is in the second stage. I will ask him to tell you what he owns; he says "The world, etc." You notice how he drawls his words, hesitates in speech, the excessive motility of facial muscles, the tremors. Now while he walks please observe the ataxic gait—how his feet are kept apart to widen the base of his support. I test his eyes and they do not respond to the light or accommodation; his patellar reflex you see is abolished.

The next case is A. A., aged thirty-four, occupation merchant, no heredity, duration eighteen months, syphilitic and intemperate. He is also in the second stage. His delusions are not quite so extravagant and his memory much better than the preceding case, but on asking him to talk, he tells you what a scholar he is—reads, speaks and writes all languages.

You notice as in our preceding case, the well-marked physical symptoms, namely, difficulty of articulation, prolonging of words, tremors, ataxia, and loss of patellar reflex. His face presents a soggy appearance and this is often present in these cases. When he came here he said he would pave the streets with gold, etc., but after being here several months he had a remission and all mental symptoms disappeared; and here let me say, in these cases remissions are often seen for a few months or even years. Their friends often begin to think they have recovered, but it is a false hope.

The physical symptoms, though not so pronounced through the remissions, usually linger to some extent, as is shown by the tremors, gait and speech.

The next case is C. W., ex-member of legislature, abstractor, a wealthy and prominent man, who has been very intelligent and highly educated, age forty, duration three years, no heredity, syphilitic, intemperate, and in the second stage. He shows a general mental weakening and is more emotional than the preceding cases. He has had delusions of grandeur, but has not now. You notice the physical symptoms are not marked. When he speaks, however, you see excessive movement of the lips. This case is slower in progress than the others, and he is much more destructive. You know the average duration of life—for this is a fatal disease—is only three years. They are usually not committed to us until they have been paretics for some time. The average duration of hospital life is only twelve to eighteen months.

The next case is L. C., merchant, age forty-three, no heredity, duration two years. He is not syphilitic nor intemperate, a man of good morals so we must look elsewhere for a cause, and here we have it. You remember I mentioned trauma as one cause: well, here is a linear depression on this man's forehead, caused by a blow which preceded this attack. When I came here, less than three years ago, they had but one case of paresis and it also developed from a traumatic cause. Since then we have admitted twenty-two cases, so it seems to be decidedly on the increase in our territory.

This case of L. C. I show you to illustrate a case passing from the second into the third stage. This man thought he had millions only a few weeks ago. His talk is now incoherent and he is rapidly passing into dementia.

This case well illustrates the necessity of an early diagnosis, not only because remedial or surgical measures might be more successful but so you can warn their friends the possible line of conduct such cases may pursue. This man, before his condition was known to the public, feeling so wealthy, burned notes and money, gave too much change in return and other un-business-like methods until he became bankrupt.

The next case is L. K., age thirty-two, butcher, duration two years, syphilitic, intemperate, no heredity and a Keely graduate. We have about five cases of paresis who have taken some one of these "whisky cures" and the "cure" is often blamed by their relatives for causing the insanity, but I believe the soil has already been prepared by the syphilis, by the years of intemperance and excessive venery, and that they would have developed paresis anyway. Again, if it is due to the "cure" why is it

the other forms of insanity do not develop? Why should my cases who have taken the "whisky cure" each give a history of syphilis and intemperance, the very causes of most cases of paresis, if the cure is the causative factor? I give this only as my own limited experience; other observers may have had a different one.

This patient has an exaggerated patellar reflex quite opposite to the others, this being due to the involvement of the inhibitory fibres which pass from the cortex to the anterior columns of the cord. He also has contractures and ankle-clonus, so that the lateral columns are also involved, and that reminds me, I had a very interesting case of ascending or spinal paresis, to show you, also a case in the prodromatic stage, but both were removed on furlough a few days ago.

I thank you, gentlemen, for your attention.

A committee of the Association of American Anatomists appointed to investigate the subject of anatomical material and preservatives rendered a report at the recent meeting in Philadelphia, of which the following is the conclusion and substance thereof:

"1. Anatomical material for the promotion of medical study should be obtained wholly under legal enactment. The provisions of the law should be compulsory upon all officers of the state and county institutions and municipal governments.

2. Of the anatomical laws which are in force in this country the committee is of the opinion that the law of the state of Pennsylvania is the best.

3. The committee believes that it would contribute to the best interests of anatomical teachings in this country if concerted action were taken by this association to secure the enactment in every state of a law controlling the collection and distribution of anatomical material, and it heartily recommends such action.

4. While many of the agents employed have been successfully used to a greater or less extent, no perfect method of preservation has yet been secured. The cold storage plan, however, approaches nearest to perfection, and some such method will no doubt come into general use when expense can be reduced. At present the great objection to the use of the cold storage plan and formalin as well is the great expense involved."—*Chicago Clinical Review*.

CAN AIR BE RENDERED ASEPTIC? IF NOT ABSOLUTELY SO COMPARATIVELY SO?

The following article by Dr. Robert A. Kerr, class of '81, offers a unique suggestion in rendering air aseptic. A somewhat similar, though less elaborate method of purifying the air was in use on some of the Mame Baudoir cases, a few years ago, if we have been correctly informed, in which the air was forced through a compartment filled with loose shavings, kept moist by water. An aseptic atmosphere about the operative field is, however, of very much less importance than it was conceived to be in the early days of the Listerian method. Increasing surgical experience has demonstrated that wind-infection from the air is of rare occurrence and hence the abandonment of the spray, irrigation and all similar procedures in wounds freshly made or those not already contaminated by contact-infection. The abundant experience in the Rush surgical clinics demonstrates this very conclusively. The hundreds of cases annually operated upon in the amphitheatre, before a large audience, where no precaution whatever is taken against air-infection, do quite as well as the private cases operated upon in the small carefully kept operating rooms of the Presbyterian Hospital:

Asepsis is the watchword of the modern surgeon. The surgeon of today is greater than his predecessors because of asepsis. Anti-sepsis as taught a decade ago was a great stride in the right direction. Asepsis is the ideal toward which modern surgery is striving. This has long ceased to be a disputed question and the only problem now to be solved is the means to the end. Much has been already accomplished in this direction. The field of operation may be readily rendered surgically clean; instruments readily and certainly sterilized. The surgeon has learned how to wash his hands. The wound after operation may be easily and absolutely rendered germ proof. There remains but one great source through which infection during operation may and does take place and over which the surgeon can exercise but little control. Rectify this and we have practically an ideal asepsis. This medium is the atmospheric air. "Of all substances that act as a carrier of microbes the atmospheric air is the most important because it is present everywhere and no one can exclude himself from it." True. But if he can not exclude himself from it it is

possible to render it innocuous so far as the operating room is concerned and possibly the hospital ward. My attention was first called to the possibility of accomplishing this object by an article published in one of the Chicago daily papers a few weeks ago. It referred to and described a process in use at the central telephone station, in Chicago, by which all air entering the rooms, in which are located the switch-boards, is purified. I epitomize the following description of the process from the article above referred to. Before the process was instituted the impurities in the ordinary Chicago air ruined the delicate mechanism in the switch-boards. The expense of repair was enormous and the system was adopted as an economic measure. The machinery consists essentially of an immense sheet-iron pipe about five feet square, extending the entire height of the building, through which the air is drawn by an electric fan in the basement. Over the outer end of the pipe is a fire screen which obstructs the passage of the coarser particles of impurities in the air. The collection here is sufficient to necessitate the changing of the screen daily to prevent complete obstruction. The air then passes over a coil of hot pipes, in winter, to warm to the required temperature. After passing the electric fan the air is forced into a great chamber where it is washed. The washing consists in projecting into the chamber through which the air is passing, a great number of streams of water broken into a fine spray so the particles of water may come in contact with every particle of air, thus washing out and precipitating all impurities, except possibly those in a gaseous state. Thus all particles of solid matter which might and do act as a vehicle for the carrying of microbes are eliminated.

As the air comes from the washing chamber it is of course heavily laden with moisture. The drying process is accomplished by forcing the air after it comes from the washing chamber through a number of horizontal pipes ranged one above another. On the inside of these pipes is fitted a stationary auger and this twists and turns the air as it is forced through the spiral opening. As it whirls around and around with great rapidity the centrifugal force throws all particles of moisture carrying with it impurities to the sides of the pipe whence it runs down and escapes. The air emerges from the pipes dry and clean. It is then passed over hot pipes in winter or cold in summer as may be necessary to bring it to the desired temperature before entering the room. Escape pipes arranged with a valve that opens only from within allow the es-

cape of vitiated or surplus air. The capacity of the machinery is sufficient to allow a complete change of all the air in the room every three minutes.

All windows are sealed. But one door opens into the room and this closes with a quick spring, and attendants are permitted to pass in and out only when necessary.

As the description of the process is given from memory I have not attempted or presumed to describe accurately all the mechanism involved. My only object has been to elucidate the principle and suggest its adoption and utility in operating rooms and hospital wards.

The advantage to be gained seems to me too obvious to require comment. The surgeon operating in such an atmosphere as this could seal up his wound with the absolute assurance that no infection had taken place.

ROBERT A. KERR.

A statue to Louis Pasteur is to be erected at Melun, near Fontainebleau, as a grateful remembrance of the many benefits accruing from his experiments in vaccinating sheep with Anthrax. The movement originated in the agricultural district where he made his experiments, at Pouilly-le-Fort in 1881.

Some idea of the great practical value of Antitoxin may be formed from the fact, according to a French statistician, of its having saved 15,000 lives in France alone, and lowered the mortality of diphtheria 66.5 per cent.

Chicago claims the distinction of having the first "Woman's Medical Club" ever organized. The club was incorporated in February with a membership of thirty, and proposes building a handsome hospital in one of the crowded down town districts.

Ohio physicians are rejoicing over the passage of a law to regulate the practice of medicine in that state

The Corpuscle.

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RUBY RED AND BLACK: Colors of Lake Forest University. ORANGE: Color of Rush Medical College.

Pres. Coulter. We present as a frontispiece to this issue of the CORPUSCLE a picture of President Coulter. We also present the last of his series of lectures on "The Physical Basis of Life." Both of these we are sure will be greatly appreciated by the students and alumni of Rush. Doctor Coulter's efficient work as an educator is too well known to demand comment. It is much to be regretted that he leaves the presidency of Lake Forest at the end of this school year to take the chair of Botany in Chicago University. It certainly reflects great and well deserved honor upon Doctor Coulter to be chosen from among so many available and distinguished botanists to fill this high and important position in the coming university of all the west.

Death of Dr. Bishop. In the death of Dr. D. D. Bishop the medical profession has lost a rising, talented and persevering member; the Faculty of Rush an able and conscientious instructor; the students a thoughtful and painstaking teacher; his closer associates a true, generous, noble hearted friend; his sisters a loving brother. Through his bright and cheerful personality Dr. Bishop was highly esteemed by all, but by those who were more closely associated with him was he most dearly beloved, and by these will his loss be most deeply felt. So suddenly has this great calamity befallen us that we cannot as yet realize the enormity of our loss. Yet, it is true, that he, our friend, who was with us in the full vigor of health but a few days ago, has passed before us to that land above we know not of.

Y. M. C. A. On Wednesday morning, March 25, a number of "Student's Club." ladies interested in the medical colleges met at the Y. M. C. A. building on West Monroe street to discuss plans looking toward the establishment of an association by the west side medical colleges. The general secretary and the state college secretary of the association were present and gave valuable advice and council. The ladies present were chiefly the wives of the professors in the various colleges in the "Latin Quarter." Mrs. H. M. Lyman was appointed chairman of an extension committee having power to act. The committee was further composed of the following ladies representing the various colleges: Mrs. H. B. Stehman and Mrs. D. W. Graham, Rush Medical College; Mrs. H. P. Newman, College of Physicians and Surgeons; Mrs. T. W. Brophy, Chicago College of Dental Surgery; Mrs. W. S. White, Chicago Homœopathic Medical College.

The purpose of the proposed new branch of the association is to furnish an association headquarters in the immediate neighborhood of the colleges so that it may be easily accessible to students. It is hoped to furnish reading and study rooms, parlor, meeting room and perhaps a lunch room.

The CORPUSCLE desires to assert its hearty approval of such a plan and to offer co-operation in carrying it to a successful end. A long felt want would certainly be in a measure filled even by so much as the establishment of a reading room. Indeed it seems to us that one of the greatest shortcomings of our own and other medical colleges is in the failure to have in close proximity to their buildings suitable places for spending vacant hours in looking over medical and general literature. This should certainly be provided. The much talked of "student's club" may find a most valuable substitute in the Y. M. C. A. But whatever may be the means the end should certainly be accomplished. The student has not within easy reach enough opportunity to become acquainted with medical literature. Besides this the social and other advantages to be derived from the proposed plan are worthy of considerable consideration.

An Authentic History, at Last. It is cause for general congratulation that such members of the profession as Drs. Norman Bridge and John Edwin Rhodes, with the assistance of Ephraim Ingals, De Laskie Miller, Henry M. Lyman and Edwin L. Holmes, have prepared a history of Rush Medical College which is interesting, complete and authentic. It will soon be issued by

the Oxford Publishing Company, appearing in the form of a beautiful volume bound in linen with text illuminated in colors, and be placed in the hands of subscribers at a cost of only \$1.50. The book is to contain twenty full-page steel plates, besides half-tone illustrations of the different buildings occupied by the college during its long and honorable corporate life.

Those upon whom the agents of the publishing company may call should remember that this history of Rush Medical College is authorized and endorsed by both Faculty and Alumni Association.

Morphine, Cocaine and Cigarettes. The following figures based upon the investigations of a United States secret service officer are of especial interest. During 1895 there were sold at retail in the city of Chicago 12,000 ounces of morphine, 3,100 ounces of cocaine, 2,880,000 packages of Catarrh Snuff (a four per cent. preparation of cocaine), and 240,000,000 cigarettes, eighty per cent. of which contained opium in greater or less quantity, and all of which contained chlorine used as a bleacher. This is two and one-half times enough morphine to kill every man, woman and child constituting Chicago's population if all taken at one time. The number of cigarettes is not only in itself enormous but represents a vast additional quantity of opium consumed, and this, too, entirely apart from medical use and solely as a narcotic. The violently poisonous action of chlorine is so well known that it needs no comment; and this no doubt goes far toward explaining the greater deleterious effect of the cigarette than of other forms of tobacco smoking. The fact that so great a proportion of cigarettes contain opium in some form makes it especially dangerous to form the cigarette habit and accounts for the great persistence of such a habit when once formed. It is an easy and natural course leading to the habitual consumption of opium in some more concentrated and potent form, especially among men, and alas too often among women also in these later days. It is hence a thing to which the physician should turn some attention and should strive to discourage and suppress.

"X" Rays. The wonders of "X" rays are greater every day. Photographs, shadowgraphs, skylographs or whatever they may be called are no longer necessary. Mr. Edison has succeeded in rendering the rays visible by throwing them on a darkened screen of small crystals of the tungstate of calcium. But this is not all. He is able to so manipulate

the ray so as to give faint outlines of soft tissues, or by greater strength to penetrate bone or even metals themselves.

The importance of the new discovery needs no argument. Its value to surgery and medicine under certain circumstances is immediately apparent. Mr. Edison proposes to make a portable apparatus for producing and utilizing the ray which can be run by an ordinary battery and which can be applied to diagnosis at any time. It is not logical to presume that the processes have yet been completed to their fullest extent. We may reasonably hope in the near future to see the internal organs of the body and their activity more or less perfectly displayed.

A Medical Insignia. In a recent issue of "The Journal of the American Medical Association," is a discussion of a plan to adopt an insignia of the medical profession to be worn as a badge or button by medical men. We believe this to be a very desirable thing. There is as much if not more reason for the physician wearing such an emblem as for the members of any other class of men. The physician's business is many times of such a nature as to make it very much to be desired that his identity should in some way be apparent. In the performance of his professional duties he should not be stopped, even for a short space of time, by any trivial cause. He should be allowed to pass all lines or processions of any character whatsoever. For the accomplishment of this purpose the city council of Chicago has already taken a step and adopted a badge to be worn by physicians upon showing which they are free from any unnecessary detainment. An insignia belonging to the whole medical profession and worn by all medical men would be preferable to this, and it seems to us very desirable.

The Physician's Higher Duty. The young physician just entering the world of practical medicine has a duty to himself and the profession and the community in which he lives which should not be overlooked, namely, his relation to society. As to his professional relations and what are the demands of his personal conduct, his aims, his rights and his obligations, the code and a little common sense will afford ample explanation. But there is a duty which every physician should consider his own concerning the social life around him. He ministers to all classes of people, caring for their physical welfare and nursing back to health organs which from injury, indiscretion or accident have lost the vital capacities requisite to adequate performance of their functions. The physician is too apt to con-

sider this the whole end and aim of his endeavors. He is prone to look only half way into the make up of the human organization. There is, however, much more incumbent upon the true physician. The object of our social organization is the progress of civil culture—the substitution of higher things for lower, the raising of the level of human thought and action by the perfecting of its knowledge. The physician is especially called upon in this capacity not because he is, in and of himself, a more important social factor than other men, but because his study and thought are such as to make him know the failures and shortcomings, and his business brings him in such intimate relations with so many kinds of people. He reaches the more confidential side of people's lives; many confidences are reposed in him; he is often called upon and is compelled to give advice upon subjects touching not only the physical but going out into the moral life of those with whom he comes in contact. And it is here where so many physicians fail. It is here, too, where they have so much opportunity to substitute for ignorance a knowledge that may prove of infinite value. It needs not then to be said that the doctor owes to his social community a life with a purpose that cannot be questioned. He can be, and he should be, a doctor of the moral life as well as of the physical. That this comes indirectly counts no less to his credit than if it were direct, so long as the end is accomplished. Modern science teaches us the almost literal truthfulness of the old adage, "An ounce of prevention is worth a pound of cure." But the knowledge of prevention comes much harder than the knowledge of treating, because it implies a connection of future possibilities or of future probabilities. It is only ignorance that keeps us back; and to ignorance of one kind or another may be laid the blame for much that calls for treatment now. It is not a sentimental imagining but a real duty that calls upon the physician to place the people with whom he comes in contact upon a real thinking basis concerning the physical body and the inevitable outcome of its abuse. If that be done and the importance of it made apparent to fathers and to mothers the physician has an office of greater value than his cures; and one, too, in which he fills that greater purpose of his efforts—the general uplifting of society and the progress of a moral civil system.

Asepsis. There seems to be great confusion in the minds of students as to the proper use and meaning of the words aseptic, antiseptic and disinfectant.

The words in the past have been used indiscriminately by medical men. At the present time the incorrect use of the words is of almost daily observation in the current medical journals. By many the words are used synonymously, and are so considered. The only way we may preserve the proper meanings is to recognize and always keep before us, their derivation, and thus prevent ourselves from floundering in the slough of uncertainty.

Antiseptic and aseptic have such distinctive significance from their derivation that use can not sanction any interchangeability; employing one for the other is from ignorance, never from custom. Antiseptic is a means, aseptic, an end.

Antiseptic is derived from two Greek words, *anti*, against; *septos*, putrefaction. Antiseptic may either be employed as an adjective or as a substantive; *antiseptic* drugs; I used *antiseptics*, show the two uses. Dunglison in 1874 defined the word as "opposed to putrefaction." Foster, 1894, defines antiseptic as, "preventing or checking putrefaction or septic infection. The remedies used for this purpose are antiseptics."

Antisepsis (substantive) is defined by Foster as a "collective name for measures intended to prevent putrefaction or infection of septic material."

Aseptic is made up of two roots, *a*, privative, "absence of," *septos*, putrefaction, absence of putrefaction. Aseptic is an adjective. Dunglison, 1874 does not mention the word. Foster defines it as "free from putrefaction or its effects."

Asepsis is a substantive and is defined by Foster as, "freedom from putrefaction and its effects."

The distinction between antiseptic and aseptic may be clearly illustrated by the following sentences: We use antiseptics to secure asepsis; Thorough antisepsis was observed to obtain an aseptic field of operation.

The distinction of meaning between antiseptic and disinfectant is not so obvious. Derivation will not show us the difference of their meaning. Authority of derivation must govern us largely, one being from the Greek, the other from Latin and both etymologically having a similar meaning.

Disinfectant (adjective and substantive) is obtained from the Latin words, *dis*, asunder, or more broadly, negation; and *inficere*, to corrupt, to poison. From this we may construct the English sense, a cleaner, a purifier. Dunglison, 1874, says "This term has been restricted by some to agents that are capable of neutralizing morbid effluvia; but the author (Dunglison) includes under it also antiseptics or agents that are cap-

able of removing any incipient or fully formed septic conditions of the living body, or of any part of it."

Disinfection, he defines "as the act of attempting to destroy miasmata with which the air, clothing, etc. may be infected." The etc. covers a multitude of sins of omission in Dunglison's mind, but helps us to a conclusion. He defines disinfection so as to include antiseptics—but the act disinfection he limits to rendering inert contaminated air and clothing and leaves us to interpret the use *of like kind*. Yet, with all, we see a faint glimmer of its restricted sense at the present time appearing 20 years ago in the natal days of *Listerism*. Neither Foster nor Gould throw any light on the limitation of the word, but Shoemaker and Potter, perhaps two of the best authorities on *Materia Medica* in America, most plainly and clearly give a restricted definition. Shoemaker's definition is: "disinfectants are used for the purpose of destroying the organic germs of disease, as they may exist in the atmosphere, clothing, water, pathological discharges, etc." Adhering strictly to the above definition we may say disinfectants are used to render inert *extrinsic* germs, i. e., those in our environment, in contra-distinction to antiseptics used to render inert *intrinsic* germs, i. e., those on or in our body, or on instruments, hands of the operators and assistants, and the solutions and dressings, in fact all which is intended to come in contact with the body or field of operation.

When for instance we fear erysipelas we fumigate the room clothing and hangings with burning sulphur (sulphurous acid gas) we use a disinfectant. By using bichloride solution locally on the surgeons hands and dressings impregnated with the remedy we use an antiseptic.

Alumni Department.

JOHN MILTON DODSON, A. M., M. D., EDITOR.

MEMBERSHIP IN THE ALUMNI ASSOCIATION OF RUSH MEDICAL COLLEGE is obtainable at any time by graduates of the College, providing they are in good standing in the profession, and shall pay the annual dues, \$1.00. This fee includes a subscription to THE CORPUSCLE for the current year. This journal is the official organ of the Association.

Dues and all communications relating to the Association should be sent to
JOHN EDWIN RHODES, M. D., Sec'y and Treas., 34 Washington St., Chicago

'92—April 1. Dr. D. D. Bishop, late instructor in histology, pathology, and dermatology in Rush Medical College, lecturer and clinical assistant to the chair of dermatology in the Women's Medical College, attending physician to Cook County Hospital and pathologist to St. Elizabeth's Hospital, and in Presbyterian Hospital of appendicitis.

Dr. Bishop's death will be mourned by the medical profession at large. He was a true physician in the broadest sense of the word; one in whom talent, perseverance, generosity, kindness and uprightness of character were combined. The remains were taken to Reedsburg, Wis., the former home of the deceased, for burial. A full account of the life of Dr. Bishop will appear in the May issue of the CORPUSCLE.

The historian of the college, Dr. John Edwin Rhodes, is anxious to complete the files of the annual announcements of the college now deposited in the college archives. He requires for this purpose the announcements for the following years—1844-5, 1846-7 and 1854-5. Will any alumnus who has in his possession or can procure one of these announcements kindly forward the same to Dr. Rhodes.

* *

The Scientific Meeting of the Alumni Association, which is to be held on the morning of Tuesday, May 26th, promises to be one of unusual interest. The secretary has received acceptances from the following gentlemen. The reputation that these gentlemen bear will assure us of a meeting that will not only be interesting, but of great value, and should be one of the most attractive features of our commencement program.

Dr. Roswell Park, Buffalo, N. Y.; Dr. Edw. P. Davis, Philadelphia, Pa., class of '82; Dr. Jas. B. Herrick, '88, Chicago; Dr. H. A. Winter, 73, Saybrook, Ill.; Dr. Lyman J. Adair, '70, Anamosa, Ia.; Dr. Jno. R. McDill, '85, Milwaukee, Wis.; Dr. W. H. Washburne, '77, Milwaukee, Wis.

The program for the banquet has not yet been completed, but the high reputation sustained by some of those who have already accepted assures us of a most delightful evening. On Tuesday evening the enjoyable feature of the last two years—a theatre party—will occur. Some first class attraction will be selected, and those who attend will be seated in classes as far as possible, so that the sociability of the evening may be heightened by the grouping of old college friends together. The arrangements for the clinics will be somewhat similar to those of the past two years. The reception to the alumni in the laboratory building, with numerous demonstrations in the anatomical, pathological, bacteriological and chemical laboratories, will fully occupy the time in an entertaining and instructive manner for the three days of commencement week. We urge at this early day that the alumni of the college make arrangements to attend the meeting. The program will be published in full in the next number of the CORPUSCLE, and invitations, containing complete list of the exercises for the week, will be sent out by the secretary in the early part of May.

* *

It seems that the class of 1894 is a political class, or is that way as far as Iowa is concerned, '94 having furnished four coroners, viz.: E. J. H. Warnshuis, Sioux Co.; G. H. Mamman, Plymouth Co.; F. P. Lierle, Marshall Co. and Elliott R. King.

* *

'68—Dr. F. C. Murphy, of Manito, Ill., has been spending a few days at the clinics and lectures.

'85—Dr. Laurence H. Prince, of Chicago, will remove April 1st from the corner of Halsted and Diversey Sts. to 51 Lincoln Ave., the residence and office of our late Professor of Surgery, Dr. Chas. T. Parkes; with whom Dr. Prince was for some time associated.

'85—Dr. A. J. Ochsner is spending his annual vacation in a visit to Germany.

'81—We clip the following from the Effingham, Ill., *Republican*:

DUNN-PERKINS.

Dr. T. J. Dunn, of Elliottstown, and Miss Anna Perkins, of the same place, were married Thursday evening, Dec. 26, 1895, Judge W. B. Wright officiating, the ceremony taking place in the parlor of the Fleming House, where they remained until the next day, when they departed for their future home in the metropolis of Lucas township. The groom is one of Effingham county's most popular and successful physicians, and the bride is a talented young lady with many excellent qualities calculated to make her a splendid companion to her worthy husband. The *Republican* and its corps of correspondents unite with their many friends in wishing Dr. and Mrs. Dunn all the happiness it is possible to extract from this life.

EDITOR CORPUSCLE, Rush Medical College.

Dear Sir:—I am in hearty accord with the answers in your Symposium on Marriage. I have just received the Feb. issue of the *British Medical Journal* in which there is a very flattering notice of this symposium and the editor brings up one very important point not noticed in your replies, viz.: hereditary diseases. By all means a young doctor should marry as soon as he is located. In choosing a wife he should become acquainted with her ancestry. I don't suppose that one man in a thousand ever thinks of it, but a young doctor should; for no physician ever marries who does not expect children to grace the union. In your Feb. number I was much interested in your article "Rush Medical Club," by E. F. Burton, '97. I think if you had such a club with a room near the college where the members could keep an open house, where they could receive visitors, making it a home for the old alumni you would see one hundred per cent. more of them than you do now. If, for instance, when old graduates, especially crossroads country doctors, come to Chicago and knew that they could come to old Rush and that there was a place for them to go to which they were welcome, a place where they might hear the news of the college, etc., don't you think that they would come more frequently? I know they would. I judge from my own standpoint. I have been in Chicago many times and did not always go to Rush because I knew that if I wanted to see any of the faculty or the school I should be compelled to go here and there in search of them and then probably fail. Now with such a club and a clubroom near the college furnished with college and hospital information, with an attendant always present, it would be very different. Have an alumni department if you please, add \$1 more to alumni dues to keep a separate alumni room, and take my word for it, it would be still another advantage to Rush, another new de-

parture. Excuse this but the spirit moved and behold this as a result.

N. A. DRAKE, Class of 1868.

Kansas City, Mo., 1896.

'81—Dr. R. A. Kerr, of Dunlap, Ill., has been spending two weeks at Rush in attendance upon the clinics and lectures.

'82—Dr. A. T. Bryan, removed in June last from Egan, S. D., to Forest City, Iowa. He has been paying Rush a two-weeks visit, in attendance upon the clinics and lectures.

'82—Dr. Adolph Slaman has a busy practice at Lennox, Egan Co., S. D.

'86—Dr. Ralph Chandler, of Milwaukee, Wis., was elected vice-president of the Milwaukee Medical Society, at the annual meeting held recently.

'86—Dr. W. N. Thompson, of Sullivan, Ind., is one of the recent visitors at Rush.

'88—Dr. Victor E. Loughridge, of Rensselaer, Ind., died Saturday, March 21, after a short illness. The following brief notice of his death is clipped from the Chicago Times-Herald. We should be glad to have a more extended obituary notice from one of the classmates or friends of Dr. Loughridge:

DR. VICTOR E. LOUGHRIDGE.

Rensselaer, Ind., March 21.—Victor E. Loughridge, of this place, died here this morning after an illness of ten days. His right leg was amputated last Monday. He was the only son of Dr. James H. Loughridge, who died here last August. He was 33 years of age, an alumnus of Rush Medical College, Class of '88, and was one of the brightest young physicians of northern Indiana. His funeral will be held Monday afternoon under the auspices of the Knights of Pythias and Masonic orders.

'89—C. H. Cremer, of Cashton, Wis., is taking post-graduate work in histology, pathology and bacteriology.

'90—Dr. O. C. Neier, of New Palestine, Ind., kindly sends us a program of the monthly meetings of the Hancock Co. (Ind.) Medical Society, as outlined for the first six months of 1896. Dr. Neier is the vice-president of the society and read a paper, March 3, 1896, on Consumption. The secretary and treasurer is Dr. C. K. Bruner, Rush 1833. He is to read a paper, April 7, on Diseases of the Kidneys.

'92—Dr. Frank Quinn, of the class of 1892, died Feb. 3rd. We have been unable to learn any of the particulars of the death of Dr. Quinn.

'92—The following extract extracted from a letter from Dr.

L. C. Weeks, who recently removed from Chicago to Detroit, Minnesota, will be of interest to his many friends: -

DETROIT, MINN., Feb. 29, 1896.

I am very pleasantly located in this town of 2000 inhabitants and am beginning to get a little practice, but of course the matter of getting acquainted is the first thing. Detroit is close to White Earth Reservation and the Indians drop in once in a while to spend their bounty.

The northern part of the state is not settled as yet to any extent, but there are a good many towns where a young man can go who will live in such a part of the world. It isn't a very lively kind of a place to live in, but a young fellow can go into lots of small towns north of this point and make a fortune. I know of several good towns in the state and will enclose a list which you can use any way you like. Anyone, to find a good location north of here would need to travel through the country and decide for himself. Not much can be learned by hearsay, or by studying the Medical and Surgical Register. Hoping you will have the success in the future you have had in the past, I remain yours respectfully,

L. C. WEEKS.

'90—Dr. L. A. Fairchild has removed to Almena, Kansas, from Randall, of that state, his former location.

'93—Dr. J. D. Wallace is at Planer, Iowa, and is looking after a large and exacting practice.

'93—T. C. Bessessen has been elected demonstrator of anatomy in College of Physicians and Surgeons in Minneapolis.

'93—N. M. Herzog is interne in the Hospital for the Insane in Rochester, Minn.

'93—M. H. Cremer, of Mazeppa, Minn., is attending clinics at Rush and will remain until April.

'93—DR. JOHN M. DODSON, Dear Friend and Teacher: The CORPUSCLE just received; and of my six medical periodicals, this journal clings closest to my affections, due to its relations to Old Rush. I always turn at once to the Alumni Department to see what the boys are doing, and especially those of the class of '93, of which I have the honor to be a member. I am glad to note the governmental appointment of Dr. J. H. Raymond, of my class, and believe him worthy of the honor. I am greatly grieved to learn of the death of Dr. Edward Tinen, also of the class of '93. His death is surely a lamentable loss, both to the profession and to the family and friends. His brilliant mind and noble character were first revealed to me

when we made our first dissection. He worked on the same subject and he was truly the quiz master for that table. I remember well his expression of delight when he found an anomaly (if I remember rightly) of the sciatic nerve, and you encouraged him to search further into the undiscovered mysteries of medical science. He was making a brave start. In this county (Crawford) lives one other member of the class of '93, Dr. C. H. Voorheis of Huntsonville, who is our present county coroner. He and myself were closely associated for three years during our medical course as class mates and room mates. But since "*Aliis Inserviendo Consumor*," though only a few miles removed from each other we rarely meet except at our county medical society, which meets every second month. Dr. Voorheis and myself are at present officers of this society. We are both married and have sufficient practice to keep the wolf from the door. The most interesting and difficult case that I have at present is one of diabetes mellitus with a complication of sciatica of the left leg of a most severe character. To relieve this patient has been a most perplexing task. Kindly accept this as my reply to your appeal to members of the Alumni. Believe me, ever a true friend and admirer of Rush and the CORPUSCLE. Yours truly, C. E. PRICE.

Eaton, Ill., Feb. 13, 1896.

'95—The following wedding announcement will be of interest to the members of the class of '95: Mr. and Mrs. Wilton McKerral announce the marriage of their sister Gladys L. Pettepiece to Dr. B. A. Arnold, Thursday evening, January 30, 1896, Polo, Illinois. At home after March 1, 1896, Freeport, Illinois.

'95—W. E. Shallenberger, of Canton, has been elected county physician of Fulton county, Ill., of which Canton is the county seat. The doctor is to be congratulated upon his success, and his friends and classmates will be pleased to hear of his good fortune.

'95—Shimoon K. Gewergez, M. D. (Persian) is house physician of St. Luke's Hospital, St. Paul, Minn. He will be very glad to hear from any member of his class.

College Notes.

ATHLETICS.

The baseball interests under the efficient guidance of Manager Frost and Captain Blake are beginning to take shape and signs of a winning team are becoming apparent. After a good course in general gymnasium work in the Y. M. C. A. gymnasium Captain Blake has commenced outdoor practice. So far little team work has been indulged in, the practice consisting mostly in fielding and batting.

As to the candidates who are trying for positions there are at present about thirty. The men with their respective positions are as follows: Catchers, Hogeboom, '96, Sheldon, '99, Herren, '99, Evans, '99; pitchers, Somers, '97, Blake, '96; first base, Schultz, '97, Stevenson, '99, Price, '97; second base, Plumber, '97 and Cooling, '99; third base, Beebe, '96, Wallace, '96, Griffith, '96; short, Stuart, '99, Wood, '97, Gee, '99, Wells, '98, Jordan, '99, Richardson, '96, Vilas, '99. Hogeboom, behind the bat and Stuart at short are doing exceptionally fine work. Stuart fields quickly and cleanly and is effective at the bat. We understand his studies interfere to some extent with his athletics but hope that he may see his way clear to continue work with the team.

The schedule has been changed somewhat since the last publication and we therefore publish it entire for the convenience of our readers. Armour Institute, Chicago, Apr. 4; Illinois Cycling Club, Chicago, Apr. 15; Lake Forest University, Chicago, Apr. 18; Chicago University, Chicago Apr. 21; University of Wisconsin, Madison, Apr. 24; Beloit College, Beloit, Apr. 25; Chicago University, Chicago, Apr. 28; Northwestern University, Evanston, Apr. 30; Lake Forest University, Lake Forest, May 6; Knox College, Chicago, May 7; Purdue University, LaFayette, May 8; Northwestern University, May 12 or 14; Notre Dame University, Notre Dame, May 15; Beloit College, Chicago, May 16; Grinnell College, Chicago, May 18. Iowa City College, Chicago, May 21; University of Wisconsin, May 22; Milwaukee Athletics, May 23.

May 29 the team will start on an extended western trip. Games can be played with following teams: University of Nebraska, Grinnell College, Western College at Toledo, Ia. and Iowa City College.

Season tickets are now on sale. They are \$1.25 and may be procured from Manager Frost. These tickets guarantee nine complete games. The management in order to secure the fine schedule was compelled to give guarantees to the amount of \$600. The only way that is open to them to raise this money is by the gate receipts. We hope that the students will show their appreciation for the time and effort spent by the management by subscribing freely for season tickets, thus greatly helping them in their work. We also hope that the faculty will arrange special examinations for the members of the team when the regular ones conflict with games arranged before the schedule was published.

The Rush Medical College Athletic Association gave its annual reception at Van Buren Hall Wednesday eve., April 1. Seventy-five couples were present and danced to delightful music furnished by Forest. The *personnel* of the company was all that could be desired, and all voted the occasion a great success.

The association realized about \$47 profit.

The management desires to thank Truax Greene & Co., Sharp & Smith and Hebard for service rendered the committee.

The game Saturday, April 4th, resulted in a victory for Rush. The score was Rush 13, Armour Institute 8.

THE RUSH MANDOLIN CLUB.

We are pleased to announce that the Rush Mandolin Club will give an entertainment in the college amphitheatre, Friday evening, April 10. The performance gives promise of being exceptionally interesting. The following ladies will act as patronesses: Mesdames W. J. Price, Chas. Fitzsimmons, Plowden Stevens, Christoff Hotz, George B. Swift, Wm. C. Pullman. R. S. Sossman, Dr. J. L. Withrow, Geo. Birkhoff, Cady M. Jordan, B Dorr, Colby.

The following program will be given. We sincerely trust that this entertainment will be a success and that all Rush men will attend and bring their friends with them. The admission is only 25 cents.

PROGRAM.

Orpheus Club Waltz	- - - - -	Preston
	Mandolin Club.	
Voca solo	- - - - -	Selected
Reading	- - - - -	Selected
	W. Colby Rucker.	
Song	- - - - -	Selected
	Rush Quartette.	

Guitar solo	- - - - -	Sebastapool
	E. Frank Jones.	
Flirtation Polka	- - - - -	Schafer
	Mandolin Club.	
	Intermission.	
Song	- - - - -	Selected
	Rush Quartette.	
Belle of New York	- - - - -	Sousa
	Mandolin Trio, Messrs. Jones, Fehr and Gee.	
Violin Duet	- - - - -	Selected
	Messrs. Skinner and Bading.	
Reading	- - - - -	Selected
	W. Colby Rucker.	
Minstrel Parade March	- - - - -	A. Coon
	Mandolin Club.	

The *Cypher* of March 14 speaks in glowing terms of the club's performance March 9 in the Schiller Theater building: "Then the Mandolin Club, true to their promise, once again took the platform and the cyphers prepared to soar once more. But the boys from the Rush Medical College had a few ideas of their own as to what the audience should do this time. They had sent them heavenward once—they would try something else. The "Minstrel Parade" was struck up and in a moment everybody in the room was seized with a sudden desire to dance. Whether they wanted to "two-step" or "galop" they didn't know—all they knew was that the music was "feet-stirring" and they must keep time with it in some form or another. Then for fear that, in spite of their efforts, the assemblage was getting above the thoughts of common mortals, the boys gave their college yell and left the platform, satisfied that the majority of the crowd at least were still kept down to cypherdom."

The following song is a production from the pen of W. Colby Rucker, '97. The music was written by J. G. Meachem '97. Go to the concert Friday evening and hear it sung:

KITTY MALONE.

In a cottage neat on a quiet street
Lives Kitty Malone and her mother,
And her face is so sweet that it makes my heart beat
When we are alone with each other.
She loves me I know, but she won't tell me so,
No matter how hard I may tease her,
But when she says "no" she speaks very low,
And my kisses go far to appease her.

CHORUS.

I love but one Kitty Malone.

COLLEGE NOTES.

She is the girl I adore,
 Love holds my heart,
 We'll never part.
 I love her more and more.
 I love but one Kitty Malone,
 She is the girl I adore,
 Others may chin her,
 But I'm going to win her,
 For I love but Kitty Malone.

Now Kitty's a queen, the best to be seen,
 In face she's the belle of the ward,
 For her form is cut clean and her face is a dream,
 Her smile is an envied reward.
 Young Jimmie the plumber and Alderman Mummer
 And all of the sports of the town,
 Casey the drummer have courted all summer
 Kitty has turned them all down.
 Her kisses will burn, in my arms she'll turn;
 When I try to embrace her,
 But when she returns, and the others she spurns.
 In the brown cot will I place her.
 Our wedding is soon. We'll be married in June.
 The bells will ring out the glad union.
 We'll list to their tune while old Father Muldoon
 Links our hearts in a happy communion.

Bading, '96, has received a hospital appointment in Milwaukee.

We advise cinque players to run shy of Law '96 and Kenaga '96.

Wednesday, March 25 Professor Senn's lecture hour was filled by Dr. Beckmann of Minneapolis, Surgeon-General of the Minnesota National Guard, who gave a very instructive lecture on "Asepsis in Private Practice." The surgical staff, with Professor Senn at the head, and the Commander-in-Chief of the Illinois National Guard, were present in military uniform and filled the arena. When the officers appeared in the arena the students rose and, under the direction of Mr. Culbertson, '96, gave the military salute, which was returned by Surgeon-General Senn. The Commander-in-Chief of the Illinois National Guard was introduced to the students and gave a short but very interesting talk urging young physicians to identify themselves with the military forces in their respective states at the earliest opportunity. He referred forcibly to the necessity and duty of patriotism.

Then followed the lecture by Dr. Beckmann. Dr. Beck-

man has had much experience in practical surgery and has made a special study of bacteriology. He has been an extensive and thorough investigator and has added much to our bacteriological knowledge. Both at home and abroad he is recognized as an authority. Hence he is especially well fitted for an address on this most interesting and important subject, "Asepsis in Private Practice."

The following day, Thursday, Professor Senn gave a special clinic before the military surgeons. Some of the most interesting clinical cases of the whole year were presented. The clinic was a very large one, more than twenty cases being exhibited, and the operative work lasting far beyond the usual time.

R. D. Russell, '97, has so far recovered as to be able to go home.

Humphreville of '97 is in C. C. Hospital sick with scarlet fever. He is rapidly recovering.

Elmer Fessler, '99, is sick in Presbyterian Hospital with recurring appendicitis.

Lesan, '97, is suffering from an infected calf cancle.

At a meeting of the senior class held Thursday Apr. 2, a committee consisting of Bourne, Willhite and Witte was appointed to make arrangements for a floral tribute to the memory of the late Dr. Bishop.

Dr. and Mrs. Dodson and son Kasson will sail for Europe on the steamer Maasdom of the Netherlands-American line in the latter part of May. They will spend the greater part of the summer in Germany where Dr. Dodson will pursue some special lines of study in the University of Berlin. The latter part of the summer will be devoted to travel, various points of interest on the continent and in England being visited. They will return to America about October 1.

Not long since a representative of the CORPUSCLE had the pleasure of visiting Dr. E. H. Abbott at his home in Elgin where he is enjoying a good practice. Elgin is a beautiful little city. However, it is not for this reason or because it has the largest watch factory in the world that the place is of interest to a physician, but because the Northern Illinois Insane Hospital is located there. This asylum at present has over eleven hundred inmates. By the kindness of the gentlemanly superintendent the CORPUSCLE representative was permitted to see through the institution under the guidance of Dr. H. J.

Gahagan, Rush '93. We feel indebted to Dr. Gahagan for many facts of interest which time and space will not permit our presenting.

Dr. LeCount will have charge of the Cook County Quiz class of '97. Under his efficient supervision the work will undoubtedly be done in the best manner. We will look for a goodly representation from '97 among the Cook County internes of next year.

J. G. Meacham, '97, was called home to the funeral of his grandfather, Dr. John G. Meachem, of Racine, Wis. Dr. Meachem had been a practicing physician for fifty-four years and was recognized as a leader in the profession. He was a member of the American Medical Association and had held many offices of trust.

S. B. Findley, '97, was lately called to his home, Monmouth, Ill., to the deathbed of his older brother. Mr. Findley, has our most sincere sympathy in this time of sorrow.

R. C. Morris, '97, lately visited the University of Michigan and had the pleasure of seeing Dr. Lombard use the "honor system" in conducting an examination in physiology. The professor presented the questions and then left the room, depending entirely on the honor of the students for honest results. Morris very carefully watched the conduct of the students and reports that there was every indication of fair play and an honest examination. Other departments of that great university are introducing this method which seems to give the greatest satisfaction.

Mr. Ben Caffee of the class of '97, was called to Frankfort, Indiana, week before last on account of the death of his father.

April 2 all college exercises were discontinued out of regard to the memory of the late Dr. Bishop.

—Not long since we had the pleasure of listening to the "Rush Medical Student's March," composed by our fellow student John G. Meachem, '97. The production is very ingeniously arranged, is perfect in harmony and shows the more than ordinary musical talent of Mr. Meachem.

—Many of the students are anxious that a class in Physical Diagnosis be formed for the summer. We hope that Dr. Corwin will find it possible to provide some arrangement so that this may be done.

—A pulmonary abscess is a collection of pus in the peritoneal cavity. D—yl—, '97.

JANUARY EXAMINATION OF THE MINNESOTA STATE BOARD OF HEALTH.

The following questions will be of interest and possible service to those expecting to take examinations for license to practice.

ANATOMY.—1. Describe the shoulder joint. 2. Name the muscles severed in amputation at the hip joint. 3. Give origin, relations and distribution of the portal vein. 4. Describe the common carotid artery. 5. Give origin and distribution of the phrenic nerve. 6. Describe the kidneys. 7. Name the branches of the thoracic aorta in their order. 8. Describe the Astragalus. Give its articulations. 9. Describe the subclavian triangle. 10. Describe the thoracic duct.

PHYSIOLOGY.—1. (a) What are the normal sounds produced during respiration? (b) Give the average number of respirations per minute in the adult. 2. (a) What is the normal body temperature? (b) What is the normal pulse rate in the adult? 3. Give the composition of air. 4. What are the functions of the liver? 5. What are the functions of the bile? 6. Describe menstruation. 7. What is the length of the spinal cord? 8. What do you understand by the term "digestion?" 9. What is the function of the iris? 10. What is the function of the crystalline lens?

HISTOLOGY.—1. What is endothelium and where found? 2. Name the different forms of epithelium. 3. Give a brief account of the histology of the kidney. 4. Give the structure of the mammary gland. 5. Give the composition of the blood.

PATHOLOGY.—1. Give the different forms of malignant tumors. 2. Name the different forms of benign tumors. 3. Give the pathology of empyema. 4. Give the pathology of tubercular peritonitis. 5. Describe the course of a typhoid ulcer.

MEDICAL JURISPRUDENCE AND PREVENTIVE MEDICINE.—1. Give the characteristic post-mortem appearance in death from asphyxia. 2. What conditions hasten or retard the appearance of rigor mortis? 3. What morbid conditions simulate poisoning by morphine? 4. What post-mortem conditions would you expect to find in a case of death from criminal abortion? 5. Give a definition of insanity which obtains in courts of law. 6. What measures (including medical treatment) would you adopt to prevent the spread of diphtheria? 7. Give methods of cleansing infected clothing. 8. Give a method of preparing milk for infant feeding. 9. What geological formations furnish the best water supplies. 10. Mention the prominent American health resorts for consumption.

MATERIA MEDIA.—1. Give physiological action and dose of Podophyllin. 2. Give five preparations of opium and give dose of each. 3. Name three mineral poisons and give maxi-

num dose and antidote of each. 4. Give the different methods of administering medicines and give advantage of each method. 5. Define *materia medica*; therapeutics; soporific; toxicology and emetic. 6. Give three classes of diuretics, and give example of each. 7. Define antipyretics and give five with dose of each. 8. Name three classes of cathartics and give example of each. 9. What do you understand by the accumulative effect of a drug? 10. Write a prescription for inflammatory rheumatism for a child five years old; and give method of computing dose for children.

PRACTICE OF MEDICINE.—1. Give the differential diagnosis of scarlatina. 2. Give the differential diagnosis of acute pleuritis, with effusion. 3. Give the clinical history of lobar pneumonia. 4. Give the etiology of the different varieties of dropsy. 5. Give the physical signs of mitral regurgitation. 6. Give the symptoms and treatment of acute meningitis. 7. Give the complications of typhoid fever. 8. Give the symptoms, diagnosis and treatment of parenchymatous nephritis. 9. Give the physical signs of acute bronchitis. 10. Give the symptoms and treatment of epilepsy.

SURGERY.—1. Give symptoms of poisoning from the surgical use of corrosive sublimate. Iodoform. Carbolic acid. 2. What is Talipes? Valgus? Varus? Equinus? 3. Differentiate between hydrocele and scrotic hernia. 4. What is paraphimosis and its treatment? 5. What is a "felon" and how do you treat it? 6. Give varieties of intestinal obstruction. 7. What are the essential points in the treatment of fractures. 8. Describe Chopart's amputation. 9. What is Myxoedema and its treatment? 10. What is Actinomycosis.

DISEASES OF WOMEN.—1. Give symptoms, diagnosis, treatment and prognosis of acute gonorrhoeal salpingitis. 2. Describe the course and relations of the female ureters. 3. Give the sources of blood and pus in the urine. How would you distinguish their source? 4. What operations are advocated for permanently correcting displacements of the uterus? 5. Describe Tait's flap operation for repairing laceration of the perineum.

DISEASES OF CHILDREN.—1. Give symptoms, course and treatment of rachitis. 2. What diseases of infancy and childhood give rise to enlarged spleen? 3. Enumerate the organic nervous diseases of childhood. 4. Upon what symptoms and physical signs would you base a diagnosis of pneumonia in a child five years old. 5. Give symptoms, complications and sequelæ of diphtheria.

EYE.—1. Give differential diagnosis between Glaucoma and Iritis. Treatment of each. 2. Symptoms, cause and treatment of Keratitis. 3. Cause, symptoms and treatment of dacrocystitis; blepharitis. Define hypopyon; synechia, hypemotropia; myopia; astigmatism.

EAR.—4. How would you treat impacted cerumen? How differentiate between disease of conducting and receiving ap-

paratus? 5. Anatomy of middle ear; function of eustachian tube; treatment of purulent inflammation of middle ear and what are the dangers apprehended?

TOXICOLOGY.—1. (a) Symptoms and treatment of poisoning by arsenic. (b) Post-mortem appearances. 2. Strychnine poisoning. (a) Fatal dose. (b) Differential diagnosis. (c) Treatment. (d) Post-mortem appearances.

CHEMISTRY.—1. What decompositions occur in the preparation of chlorine from rock salt? Write the equation. 2. In what different compounds is sulphur found in nature? 3. How does ferric oxide act as an antidote to the poisonous properties of the arsenites and arsenates.

LOCATIONS.

PRACTICE FOR SALE.—Physician's office and residence in town of nine hundred; price, \$1,500, practice of \$4,000 thrown in. Address at once, F. W. RIDEOUT, Atwood, Ill.

PRACTICE FOR SALE.—\$300 cash will buy my practice, team and small stock of drugs. This is a small town in a well settled, fine farming country. Practice is worth \$3,000. Reasons for selling so cheap and particulars by addressing

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Care *Columbus Medical Journal*.

PRACTICE FOR SALE.—\$500 will buy office and fixtures, stock of drugs and all equipment for practicing medicine and surgery. The nearest physician is eight miles. I wish to retire.

D. F. BOTHWELL, M. D., Kingston, Wis.

Shakopee, Minn., 1,700, county seat; two doctors, one a homeopath the other a German regular. A first-class place for a German Catholic.

Address, STRUNK BROS., druggists.

Madison, Minn., 1,000; county seat, two doctors, the best one expecting to leave soon. Address, W. E. TODD, M. D.

Waterville, Minn., 1,500; summer resort. two railroads, two doctors. Good location for young man.

Address, C. P. DOLAN, M. D., or REV. W. A. WARREN.

Delano, Minn., 1,300 good farming country, thirty miles west of Minneapolis. Good location.

During the last ten years I have had my residence and office in a thickly populated part of the city, surrounded by factories, machine shops, etc. I now wish to change my residence but retain my office and am prepared to make an exceptionally good arrangement with an energetic, wide-awake physician, one willing to work. I have nothing to sell.

J. C. PICKARD, M. D., 204 Milwaukee Ave.

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BOOK REVIEWS.

CLINICAL LECTURES OF ABDOMINAL SURGERY AND OTHER SUBJECTS. BY CHARLES T. PARKES, A. M. M. D., late Professor of Surgery Rush Medical College, Surgeon to the Presbyterian Hospital, Surgeon in charge of St. Joseph's Hospital, Surgeon in Chief of Augustina Hospital, Consulting Surgeon Hospital for Women and Children, etc. Edited by Dr. A. J. Oschner. Cl., 8vo, gilt top, pp. 477. Chicago; The W. T. Keener Co.

The work comprises as its subject indicates, a series of clinical lectures given by the author in his clinic at the Rush Medical College; and since a large number of patients were present for treatment at each clinic, only the important clinical facts were dwelt upon. Such a clear, concise discussion of the salient features of so great a variety of cases as are common only to a great clinic, makes this volume one of especial interest and value. The author's classic paper on gun-shot wounds of the small intestines, read before the American Medical Association in May, 1884, is also reprinted here for permanent preservation.

Dr. Oschner as editor has shown his greatest tact and judgment in preserving as nearly as possible the language of the author, "because in this, it would seem, by reason of its force and charm, lie the special value and fascination of this work for his pupils and friends." Still, as has been said by others in reviewing this work, the reputation of Professor Parkes as a surgeon, a lecturer and teacher will not depend upon anything incorporated in this volume. It is rather in the hearts of the alumni of the great college in which he taught, that his memory will be cherished and kept green. His stalwart form, his keen, yet kindly eye, his manual dexterity, his quickness, his minute knowledge of anatomy and his overrunning good nature are the characteristics by which those who heard him lecture in the clinic amphitheater made famous by Brainard and Gunn, and to whom he was no unworthy successor, will best remember him. He died when he had just reached the goal for which he had striven for so many years, but the steps by which he reached it are demonstrated in the volume under consideration."

ELECTRICITY IN ELECTRO-THERAPEUTICS. By EDWIN J. HOUTON and A. E. KENNELLY, Sc. D. Cloth, 412 pages, 128 illustrations. Price \$1. The W. J. Johnston Company, 253 Broadway, N. Y.

The purpose and scope of this work, as stated in the preface is well carried out, and will therefore be found of especial benefit to those in whose behalf it is written.

This little book is intended to meet a growing demand which exists not only on the part of general medical practitioners, but also on that of the general public, for reliable information respecting such matters in the physics of electricity applied to Electro Therapeutics, as can be readily understood by those not specially trained in electro-technics.

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D. D. BISHOP, M. D.

The Corpuscle.

RUSH MEDICAL COLLEGE, CHICAGO, ILL.

MEDICAL DEPARTMENT LAKE FOREST UNIVERSITY.

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IN MEMORIAM.

DR. DENNIS D. BISHOP.

Dr. Bishop was born December 8, 1862, at Reedsburg, Wisconsin. He left his father's hop-farm at the age of fourteen and served an apprenticeship in the Pharmacy at Grand Rapids, Wisconsin, becoming a licenced state druggist. He studied medicine in my office for two years, after which he attended the Wisconsin University for two years. He entered Rush Medical College in 1889 and graduated from that institution in 1892. He was an assistant instructor in the College during his course and an instructor in Skin-Diseases and Histology from his graduation until his death. He was a special student of Professor Hyde for several years. He served as an interne in Cook County Hospital for eighteen months. For the last year of his life, he was one of four chosen examiners in Chicago for the New York Life Insurance Company.

At the time of his death Dr. Bishop was instructor in Skin-Diseases and Histology in Rush Medical College; a clinician in Skin-Diseases and Venereal Diseases to the Cook County Hospital and the Woman's College. He died from an attack of appendicitis.

Dr. Bishop was a noble man, of modest manner, of honest purpose. He was of superior mental gifts, of keen discernment and balanced judgment. He was a plain blunt man; honest as a Socrates and as true as steel. He was the best of friends. I knew him almost two decades and never saw him

bend to meanness to deprive a fellow of his rights. The history of his life is full of sacrifices for those dependent upon him. Poor Bishop's life was filled with the struggles of supporting his parents and acquiring an education. In adversity he was rock and oak, in prosperity a man of quiet cheerfulness. Dr. Bishop was ambitious and laid his plans for continued progress. He commanded the respect of men for his honesty, his industry and the integrity of his purposes. He was a self-made man; earned his own money and educated himself. He was a faithful servant, an unswerving friend; sturdy for the right and liberal toward opinions. He gradually rose above his fellows from the very integrity of his actions, his cool, logical thought and persistent industry.

Dr. Bishop's life was marked by deeds of kindness; he was loyal to his friends, protected the weak and encouraged the disheartened. He was a good citizen. Many a time and oft have we received kindness from his hands. His advice was good, his friendship was always natural and helpful. The world is better that he lived, though he passed in the prime of life through the unknown portals. The memory of his life is sweet and noble.

Dr. Bishop was popular with his students and fellow workers; they loved him and buried him in a grave of flowers. His short life was full of scientific attainments and through earnest industry he had already obtained an enviable position in his profession. Dr. Bishop never finished his education; his mind was ever progressing, his hand was never still. He was in love with Nature, delighted with every flowered vale and wooded hill. He loved the wooded banks on which he lived so long, its flowing waters and its hidden power. He had a many-sided mind well stored with knowledge of Nature's laws, yet silent to all but his closest friend. He was a quiet man, the soul of honesty, the noblest of friends, a bright spot in many lives, the grandest of citizens and his memory will live forever in the hearts of his friends.

His labor was a monument of industry, and by steady work he rose to an envied position among his fellows. All who knew him well will sadly miss him. Such lives can ill be spared and yet they leave behind them beautiful lessons, and during his short life Dennis Bishop proved that by persistent effort and unswerving honesty, one may command the respect and love of his fellows.

BYRON ROBINSON.

LECTURE: ADVICE TO YOUNG PHYSICIANS.

BY DR. BENJAMIN RUSH.

The notes of a student upon the lectures of Dr. Benjamin Rush delivered in Philadelphia in 1784, came recently to the hands of Prof. James Nevins Hyde through the kindness of Dr. F. M. Briggs of Boston. Dr. Briggs received the notes from his father John K. Briggs of Dedham, Mass., who was also a physician living in the early part of this century. It is not known how he obtained the volume as he lived long after the lectures were delivered and could not have taken them himself. We append one of the lectures taken from this collection and reproduce it "verbatim" in order to retain as far as possible the unique phraseology and spelling of the Revolutionary Period.

From this lecture we may conclude that Dr. Rush was accustomed to give, at the close of each course, a valedictory address, in which he gave wholesome advice to the graduating class, advice which applied not only to the professional career but that which also appealed to man's inner consciousness and the higher sensibilities.

A hundred and twelve years have passed since these lectures were delivered, yet, today, the young man as he leaves behind him the college doors and enters into practice may take these precepts to heart and will thereby be in a great measure equipped to enter upon his great service to mankind.

(Copied Literature.)

Lect: 43 Idem: delivered at the same time his valedictory lecture.

I shall conclude this course of Lectures with a few directions to assist you in establishing yourselves in business and in conducting yourselves properly to your patients. There are three modes of getting into practice. 1st, by opposing every prejudice of mankind, by proclaiming war against the laws of the religion of your country, by avoiding decency in your behavior and conversation, by doing and saying nothing like other people, and above all by ridiculing the Christian religion and prostituting the sacred writing to the purposes of wit or

impiety. This species of character will often succeed with the weak and vulgar minds.—Paracelsus was the original of it, he had many imitators in every part of the world such as Dr. Radcliff of London, Dr. Pitcarin of Edinburgh, Dr. Tronehin of Geneva, and Dr. McGra of this country. These commanded respect only from their abilities, but this respect was of the same nature with the homage which the Indians pay to the Devil. Such Physicians are a disgrace to our profession, to Society and to human nature.—A 2nd mode of getting into practice is to assume as much gravity as possible, let the heart be confined to its ordinary limits, least it should be lost in the limits of sympathy and grief. The dress and behavior of such a Physician must be solemn and formal, a smile would disgrace the dignity of such a character for ever. In some countries a wig and a cane will add greatly to the importance of such a character. A Physician of this description is esteemed only for his skill, and is valued by his patients as a useful family dog or horse, only for the services he is capable of rendering. A 3rd mode of getting into business is to ingraft the Physician into the man, to feel the obligations, and practice the duties of humanity and religion upon all occasions. To consider the profession as agreeable only as it enables us to make our fellow Creatures happy, to act in the capacity of Guardian Angeles to our patients. To make not only their sickness but all distresses and wants our own. To act in every respect to our patients as we would wish them in like circumstances to act towards us.—Such characters have existed in the world; Dr. Stahl, Dr. Hoffman, Dr. Boerhave, Dr. Lydenham, Dr. Fothergill, Sir John Pringle, Dr Rutherford, Dr. Cullen & Dr. Let-som, were all friends to religion and instead of being distinguished by singularities of any kind, from the rest of mankind, were known only from their amiable maners and extensive benevolence. These are the men I would recomend to your imatation. They were all benefactors to mankind and they have justly been placed by the gratitude of their respective countrymen, among illustrious men who have rescued and dignified human nature,—In order to asist you into getting into business, as well as to render yourselves more extensively useful, I beg leave to recomend to you to exempt the following discriptions of people from charges, 1st, Physicians and the families of Physicians, 2nd, Clergy of all denominations with all that has been said against them, they are a usefull body of men, and as by the nature of their professions, they are per-

cluded from all opportunities of making money, or improving their fortunes it would be cruel to tax them with Dr. Bills. The favors confind, or rather the debts paid to this body of men, produce ample returns. No body of men have half the influence in society and I know of no more speedy or effectual method for a young man getting into business than by receiving the friendship of the Clergy. 3rd. Schoolmasters, from the self denial, as well as the utility of their profession have a large claim upon the benevolence of a physician, they should therefore be exempted from charges. 4th. Midwives and Nurses, from connections with and subserviency to our proffesion, should be exempted from charges. 5th, Kind servants of all kinds in families, that rewards us generously have a large claim likewise, upon our charity. From the extremes of heat, cold and labor, to which they are exposed, these are subject to many more diseases, than people in more easy circumstances. How cruel then would it be to exact from them their pittance they earn at the expense of their health. Remember gentlemen when you climb the cold and Dreary Garrets in which the poor creatures are thrown in sickness, the relation you bear to them as fellow creatures. The poor coachman who raises his hand with difficulty to offer you his pulse is your Brother, and the Kitchen wench, whose fever and pains have been brought on by damps and colds at unseasonable times is your Sister, for Mankind you know are all of a family. The poor of every class and denomination are the objects of our care. Dr. Boerhave used to say they were his best patients because God was their pay master. The first Physicians I have ever known, have found the poor the scaling Ladders on which they have ascended to business, emnience and reputation; diseases among the lower classes of People are generally simple, hence they exhibit to a Physician the best casses of Epidemics which canot fail of investigating and curing the complicated diseases of the rich and indolent. There is an inseparable connection between a man's duty and interest, whenever you are called to visit a poor patient, therefore imagine you hear these words of your Blessed Saviour sounding in your years, "Take care of him and I will repay thee" and "because thou hast been faithful over a few I will make a ruler of many."—I shall now give you a few directions with respect to charging. When we consider the expence of medical education the sacrifices a Physician is obliged to make of ease, company and even health to his profession and above all the anxiety that is conected with the im-

portance charged of the life of a fellow creature, and when we add to all these the inestimable value of health, I hardly know how it is possible for a patient sufficiently and justly to reward his Physician. But it becomes us to consider on the other hand that sickness deprives men of the means of making money, that it encreases all the expenses of living and that high charges often drives patients from regular bred Physicians to Quacks. These considerations should lead us to make our charges as moderate as possible and to conform them to the following state of things. Avoid measuring your services to the rich by samples, dramhms, and ounces, it is an illiberal mode of charging.—On the Contrary let the number and the times of your visits and the nature of your patients diseases determine the figures in your bill. It is certainly just to charge more for curing an Appoplexy than an intermitting fever. You have a just right to be paid for risking your own life in visiting a patient in a contagious disease, therefore charge more for curing a putrid fever than an appoplexy, even when the number of medicine and visits were the same, you have a right likewise to be paid for your anxiety. Charge the same services therefore higher to the Master or Mistress of a family, or to an only son or daughter, who call forth all your feelings and industry, than to a slave whose life is of much less consequence to a family or a community. If a rich man demands more constant or punctual attendance which is both comon and natural than a poor man; if he imposes the restraint of keeping you to certain hours, by calling in another Physician to consult with you upon every trifling occasion be sure you make him pay accordingly for it. I have only to add to this head that the sooner you send in your bills after the patients recover the better. There is nothing thought of with more gratitude than the services of a Physician in sickness and then there is nothing remembered with less after the recovery of our patients. I will here let you into a secret with respect to the different descriptions of your patients. 1st, when a man calls for you to go with him immediately to a case that requires no such expedition, or 2ndly when he tells that the patient will have no other Dr. but you; and above all 3dly when he tells you shall be well paid for your trouble, depend upon it such persons mean to impose upon you. Indeed I have generally found the most troublesome patients the most backward in paying up accounts. A man who usually intends to pay his Physician, wisely chuses to have as few unnecessary visits as possible. As the best

mode of improving yourselves in the Practice of Physick I beg leave to recomend to you to open all dead bodies you can without doing violence to the feelings of your patients or the prejudice of the comon people. Preserve a register in the weather and above all record the Epidemic of every Season, their times of appearing and disappearing and the conection of the weather with both. This should be done as regularly as you post your books. Keep a book likewise for Chronic casses. Record the name and age and occupation of your patients in it describe his disease and every change in it and mention particularly the dose of every medicine you give. It is impossible for you how much improvement and facility in practice you will derive from following those directions. In your conduct to your patients make it a rule never to give one of them over in an acute disease. It is impossible to tell in an accute disease where life ends and death begins. Dispute therefore every inch of ground with the King of Terrors. Hundreds of patients have recovered who have been pronounced incurable to the great disgrace of our profession. Make it a rule never to be angry with a patient or resent anything a sick man can say or do to you. Some Divines consider man as half beast and half Devil. Politicians consider men as humanum, or human Cattle. It is business of Physicians to consider them under the more delicate and human character of madmen. Sickness often adds to the degrees of this madness, we are therefore to bear with all the reproaches and insults of our patients with meekness and silence. It is folly to resent injuries at any time, but it is cowardice in the extreme to resent an injury from a sick man for he is not in a situation from his weakness and dependance upon you to contend with you upon equal terms. You will find it difficult to tie your patients to you by the obligations of friendship. You will often find those families most disposed to leave you, in which you have displayed the highest degrees of skill and humanity. These acts of neglect and ingratitude should never extort from you the least mark of disrespect or resentment, by taking no notice of such injuries, you will often find the same caprice that led them away from you will often bring them back again.

I have now gentlemen only to thank you for your attention with which you have been pleased to honor these Lectures, and to assure you that I shall ever esteem myself happy in rendering you all the services that lay in my power in any way you are pleased to comand me. Accept of my best wishes for your happiness and may the blessings of hundreds and thousands that were ready to perish, be your portion in life, your comfort in death, and your reward in the world to come.

February—22d, 1784.

CROUPOUS PNEUMONIA DUE TO CONTAGION OR DIRECT TRANSMISSION OF THE INFECTIONOUS MATERIAL.

BY GEORGE H. WEAVER, M. D.

That croupous pneumonia is at times contagious and transmitted directly from one person to another has been insisted upon by numerous writers in various countries, and their opinions have been substantiated by closely observed clinical facts. Still the authors of our standard text books on the practice of medicine, if they refer to the subject at all, seem inclined to doubt such an occurrence. Many well marked epidemics of pneumonia have been observed. In such instances, the large number of cases occurring in a single prison, barrack or locality can only be explained by the presence of a common source of infection, by a transfer of the infectious agent from individual cases to others, by unhygienic conditions affecting alike all the persons attacked, or by a combination of all these factors. While it is probably true that unhygienic conditions, chilling of the body, general depression of the system from preceding sickness or fatigue, etc., render the individual more susceptible to the virus of pneumonia, it is not so easy to state when the infectious agent enters the body or from whence it comes. It is generally admitted that the cause of most cases of acute croupous pneumonia is the pneumococcus described by Fraenkel¹ and Weichselbaum.²

The micrococcus lanceolatus (pneumococcus of Fraenkel) is found in the upper air-passages and mouth of a considerable proportion of healthy individuals.¹

The theory has been advanced that under conditions which lower the vital resistance of the body to it or increase its virulence, the micrococcus lanceolatus, already present, becomes pathogenic for the individual and causes pneumonia or some other disease process. It would be at least as logical to suppose that under the action of the various agencies which ren-

(1)—Vehr. d. 3. Congr. f. inn. Med. 1884. Zeitschr. f. klin. Med. Bd. 10, 1886, f. 401; Bd. 11, 1886 f. 437.)

(2)—(Wiener med. Jahrbucher, 1886.)

(1. Sternberg, Claxton, Fraenkel, Walf, Netter, Vignal, References are to be found in Manual of Bacteriology, Geo. M. Sternberg, 1892.)

der the individual susceptible to pneumonia, if virulent specific bacteria be introduced into the mouth or upper-air passages from without the body, the disease would be caused. It is well known that the micrococcus lanceolatus is particularly virulent when obtained directly from the body of the diseased animal. The transmission of the bacteria may be readily accomplished in different ways. *Bordoni-Uffreduzzi* (*Centralblatt f. klinische med.*, No. 17, '92,) found that pneumonic sputum, which had been inspissated from exposure to diffuse day-light for from nineteen to forty-five days, retained its property of producing typical septicæmia when injected into animals. Exposure to direct sunlight for twelve hours lessened the virulence of the sputum, but did not destroy it. In dried and pulverized sputum the organisms might be readily carried to the nose, mouth and pharynx in inhaled dust.

In other instances the infection may be carried directly to the mouth or nose by the hands, cloths, etc., soiled by sputum. In the first of the cases we observed, the former method is most probable. In the second case it is most likely that the wife carried the infection to herself upon her fingers or upon the cloths soiled with expectoration with which she would wipe her own face. In most of the instances reported as examples of contagion in pneumonia, the resistance of the one secondarily affected had been reduced in some way, most often by the fatigue from long watching and nursing. In the first of our cases, the preceding sore-throat had left the patient very much prostrated. In the second case the weakness following an attack of influenza together with the additional depression incident to prolonged watching over the husband placed the wife in a susceptible condition. In the second case the husband had contracted the disease away from home, from which he had been absent for several months, and the pneumonia was well developed when he returned. Thus a common source of infection for him and his wife is less likely to have existed. The cases which we have personally observed are briefly as follows:

CASE I—A man of about fifty years of age suffered from a typical pneumonia of one lower lobe with profuse expectoration. No measures were taken to disinfect the sputum or prevent its becoming dried. During the first part of his sickness a son of seventeen years of age had a sore-throat and on the sixth day of his father's illness was attacked with a croupous pneumonia, involving the right lower lobe, which terminated

by lysis, and was followed by an empyema of the same side.

CASE II—Pneumonia occurred in a man of fifty-eight years, involving the entire right lung and terminating fatally on the seventh day. He had been absent from home for several months and the symptoms of the pneumonia were well developed at the time he returned. During his sickness the expectoration was very profuse and tenacious and when he became too weak to expectorate, the wife, who nursed him, used her fingers, and cloths to remove the sputum from his mouth and pharynx. On the day of his death, his wife exhibited the initial symptoms of a pneumonia, and passed through a severe course of the disease, the right lower lobe being first involved and later the right upper lobe. The case terminated in recovery. Just before the return of the husband, his wife had quite a severe cold.

From the large number of instances in the literature we will refer to only a few of the most interesting ones.

Holwede and *Musenwich* (Archiv für Kinderheilkunde, Bd. II. f. 18., 1880,) report fifteen cases of croupous pneumonia in children, occurring in a village of 400, from March 20th to April 2nd, 1880. Most of the cases were in neighboring houses, sometimes two or three in one house. No more than three cases were observed on any day.

Massalongo (Archiv gen. de med., 1885,) described an epidemic of pneumonia in a town of 200, in which five per cent. were attacked, with a mortality of thirty per cent. The first cases were located near a foul pond, and from here they extended so that usually neighboring people were attacked one after another.

Peukert (Berliner klinische Wochenschrift, 1881, Nos. 40 and 41,) observed an epidemic of genuine pneumonia in which the disease was located in a circumscribed area. He clearly traced the course of infection from one individual to others.

Daly (London Lancet, Aug. 11, 1894,) described the occurrence of pneumonia in a man of 68 years, followed by the same disease in his wife two days later, and in another two days the physician was attacked by the same disease. All the cases were fatal.

Troby (Lyon med., 1889, No. 40,) saw three cases of pneumonia in bakers who had slept in the same bed for six days. The cases developed two and three days apart.

Kuehn (Deutsches Archiv f. klin. med., Bd. xxi, p. 348,) reports an epidemic of pneumonia in a prison in which one hundred and twenty-three cases occurred, of which seven were

in officers of the institution. In some cases the transfer of the infectious material was clearly traced.

Blythe (Lancet, 1875,) describes an instance where a farmer affected with pneumonia was nursed by his niece. This niece contracted pneumonia and carried it to her husband.

Wyman (Boston Med. and Surg. Journal, Dec. 15, 1881,) relates an instance of a woman who died from pneumonia contracted while nursing her nine-year-old son who was ill with the same disease.

Townsend (Boston Med. and Surg. Journal, Mar. 27, 1890,) reports a long series of cases occurring in Boston. Many of them seem to show conclusively the contagious character of acute lobar pneumonia.

Campbell (Montreal Med. Journal, March, 1894,) describes three cases of pneumonia in a mother and two children. The second case occurred two days after the first, and the third three days after the second.

Boyce (Pittsburg Med. Review, May, '94,) makes the following report. A boy of seventeen years was nursed by a brother. On the fourth day of his illness the brother developed a pneumonia. The mother, who nursed both boys, was shortly afterward taken sick and passed through a regular course of pneumonia. One son died.

Gwynne (British Med. Jour. Nov. 1, 1890,) described an epidemic of pneumonia in Sheffield. In some instances the attack could be traced to direct infection.

Sokoloff (Bolnitchuaja gazeta Batkina, 1890, Nr. 29, Ref. Brit. Med. Jour. 1890,) after the careful observation of two thousand three hundred and sixty cases, concludes that there can be no doubt that croupous pneumonia is an infectious disease which is (in hospitals) transmitted from patient to patient, or from neighbor to neighbor. He recommends that every hospital keep special wards for patients suffering from pneumonia and that wards which have been occupied by pneumonia patients should only be used for others after the most careful disinfection.

It is not our purpose to urge or even suggest that croupous pneumonia is contagious in all or even a large proportion of cases. We do, however, believe that it has been shown by abundant well observed clinical cases, that at times susceptible individuals are infected by the specific cause of pneumonia, transferred more or less directly from a preceding case. That the micrococcus lanceolatus is frequently found in the saliva of

healthy individuals, only shows how much natural resistance to it is present in most persons. The same facts are noted in connection with various infectious diseases, as diphtheria and tuberculosis. The measures which are now carried out by intelligent physicians to prevent the spread of diphtheria, tuberculosis, and typhoid fever through the sputum and fæces should also be applied to lobar pneumonia.

If even the possibility of direct infection be granted, it becomes our duty to do everything possible to prevent it. Those having the care of such patients should be warned against soiling their hands with the expectoration, and should be instructed how to properly cleanse them before eating after handling the patient. All clothing or bed-linen soiled by sputum should be sterilized by boiling. If the patient cannot use a cuspidor, old cloths or Japanese napkins may be employed to receive the sputum, which should be burned. The latter are cheap and a fresh one can be used each time. A large cloth, used over and over many times is not to be allowed. Every precaution should be taken to prevent the drying of sputum upon cloths, bedding or cuspidors, so that it may not be detached and distributed in dust.

PROFESSOR SENN'S CLINIC.

BY BYRON ROBINSON, M. D., in *Medical Record*.

Of the able galaxy of surgeons who have filled the Rush Surgical Chair—Brainard, Powell, Gunn, Parkes—Senn is the most brilliant genius. He is a rare combination of a very practical worker, and yet he by no means discards the theoretic side of teaching. In practical application and vigorous theoretical views he resembles Lawson Tâté. Senn is a man of vast conceptions. He grasps the whole domain of medicine and surgery with a master hand. Though he may not exhaust subjects like the slow, broad analysis of the philosopher Fenger, yet his brilliant generalization of subjects is attractive and practical. Senn is an eloquent clinician, an impressive teacher and a practical, conservative surgeon. He uses stately sentences and sesquipedalian words requiring a disciplined mind to fully comprehend. He excels as a diagnostician, quickly detecting the trend of pathologic processes. His prophecy in prognosis rests on past experience as the best prophets of the future are those of the past. Though born

with superior powers, yet he has risen to fame through the genius of labor. Keenly practical, naturally suspicious of traditional views being imperfect, he sought confirmation by experimentation of natural phenomena. He saw that, "To the solid ground of Nature trusts the mind that builds for aye."

Senn holds the most magnificent clinic of the world. The late distinguished Billroth, the foremost surgeon of all the world, did not present such practical views in so short a time. But Billroth exhausted subjects, for I have heard him lecture three days on a scar. He was too ponderous and slow to enthuse an audience as Senn does. Senn's life and soul is in his clinic, and from the treasury of books and nature he has a mind stored with a rich array of wealthy thought. Nature's first and richest blessing to Dr. Senn was his physique, his enormous physical capacity for work, a body capable of almost any strain. A large heart pumping blood into a big brain, supplied by ample lungs and a healthy stomach, unfold a story of continuous capacity for endurance. The peculiar trait of Senn is the genius of persistence, the indefatigable labor that unlocks the secrets which lie beyond the reach of common energy. His physical power of labor enables him to pursue, methodically, subjects beyond the reach of his fellows, for though one may be endowed with mental gifts, a physique is requisite for continuous thought. Genius is the product of labor, and labor is the genius of application. Senn has followed with wonderful success his investigations amidst a laborious and exciting practice. He has experimented methodically and investigated with definite plans—all involving work far beyond the inclination of most physicians. Senn's reputation was built in fields in which personal labor alone availed—the fields of surgical pathology. Most men require to accomplish any meritorious object with the microscope absolutely uninterrupted leisure, but he accomplished objects which excited admiration amidst a vast and exacting surgical practice. Senn judiciously avoided desultory investigations, the bane of many gifted minds. All practical investigators recognize that only persistent special labors in special fields is of benefit to the race. Senn has a gift of transmitting enthusiasm for work to his fellows, not only by his interesting clinical teaching but by his writings. Few can excite such intense aspiration beyond their personality, beyond sight and hearing. Of course we are all fortunate enough to live in a practical age of experiment. Even the laity today ask what is the practical effect of any new

force or remedy. Yet only reasonable investigations demand attention,

Senn's method of teaching is a combination of the practical American and analytic German style. He reflects the investigating power of his German masters. A large majority of his quotations are from German authors. He has a marvelous power of passing rapidly from one patient to another, and with the enviable power of applying the concrete pathology to the patient in hand. In diagnosis he reminds one forcibly of the idea that probability is the rule of life, and that natural pathologic processes may be sought out. In his clinic which he holds twice a week, he has established a magnificent method of instruction, a Socratic style. He has a Consulting Staff of three seniors; each of these men brings a patient into the arena, gives a short clinical history of the patient and a diagnosis of the case. Now, a man's knowledge is apparent from the questions he asks. After the senior has pronounced his diagnosis, Senn closely questions his methods and views for the faith that is in him. In these four patients the whole field of medicine and surgery may be encompassed, and it is one of the most instructive, suggestive clinical hours found in any country. It is equal to the clinic of Von Bergman, of Czerny, of Albert, of Nothnagle, of Erb, of Leyden. The diagnosis must rest on analysis, on exclusion, on pathologic facts and on nothing else questionable. The method Senn pursues, especially at the head of one of the largest colleges in the country is of immeasurable value to the profession, and that is in conservatism. Senn can not be in any sense styled a "cutter." He saves members and organs that many would sacrifice. He advocates that sweeping removal of organs and parts should not be the surgery of to-day and practices sharply his views in his vast clinic. He pokes a little fun at the special gynecologist, but, of course, we magnanimously forgive him. He may not always be right in his views of retaining organs, which could be removed with future comfort to the female patient, at least, but in general he is influencing surgery and young surgeons in the right direction. I believe that sweeping removal of organs is not the surgery of the XIXth century. Surgery is to repair, to prolong life and diminish suffering, and not to demonstrate perfect operations.

The program of his clinic is extensive. Rush College with Senn's fame taps wide regions for its clinics and it presents all varieties of diseases during the two or three hours which it

continues. Many rare cases which have baffled the diagnostic powers of local talent, are sent to Senn's clinic for diagnosis, and it is curious to note how so many turn out to be tuberculosis, in the treatment of which he has made such successful advance.

There is a notable feature in the change in the surgical clinics of this college in the past ten years.

Gunn was a clever and dexterous surgeon who made rapid diagnosis and prided himself on rapid use of the scalpel. His discussion of etiology and pathology was very limited. Parks' short incumbency of the chair was some improvement over his predecessor especially in the line of experimentation and pathology. But Senn pursues entirely new methods and assumes new ground. With him pathologic anatomy is the essential ground for operative procedures. Bacteriology must be understood. Etiology is prominently discussed and prophylaxis assumes importance. Senn discusses far more his reasons for using the scalpel than how to employ it. His clinic is unsurpassed for learned and brilliant views of medicine and surgery, for accurate diagnosis, for abundant and varied material, for conservative and radical methods and for impressive instruction.

Dr. Scheele, a chemical expert, says that 90 per cent. of the beer brewed in New York would not come up to the test prescribed by the German Government, which is not a severe one, only insisting that pure beer shall be brewed, and fixing severe penalties for the production of any other kind. It is an open secret that American brewers do very much as they please, putting all sorts of illicit stuff in their concoctions. So far they have been able to ward off any troublesome litigation, but it is time that their product was subjected to a strict and uniform official supervision, as it is in Germany, France, Brazil and most other beer consuming countries. It is a question of the public health and well being, though the brewers in general seem to regard it as one which ought to be considered only from the point of view of their own private interests.

THE USE OF THE OPHTHALMOSCOPE BY THE GENERAL PRACTITIONER.

BY CASSIUS D. WESCOTT, M. D., of Chicago.

Read by invitation before the Section of Pathology, of the Chicago Academy of Sciences, December 23rd, 1895.

As my place of residence makes it impossible for me to enjoy the privileges of membership in this society, I feel much honored in being invited to address you; and I am particularly pleased that the subject chosen for me should be the use of the ophthalmoscope in general medicine, for it is a subject in which I am much interested.

Growers, in his excellent work on Medical Ophthalmoscopy, begins his introduction as follows:—

“The ophthalmoscope is of use to the physician because it gives information, often not otherwise obtainable, regarding the existence or nature of diseases elsewhere than in the eye. This information depends upon the circumstance that we have under observation. 1. The termination of an artery and the commencement of a vein, with the blood circulating in each. 2. The termination of a nerve, which, from its close proximity to the brain, and from other circumstances, undergoes significant changes in various diseases of the brain, and in affections of other parts of the nervous system. 3. A nervous structure, the retina, and a vascular structure, the choroid, which also suffer in a peculiar way in many general diseases.”

Of course no one will deny the utility of being able to find within the eye, corroborative and sometimes the only positive evidence of serious disease in other organs especially if such information can be obtained quickly and easily. When most of us were students, however, the use of the ophthalmoscope was not systematically taught as a part of the undergraduate work and in the medical school with which I am connected, one of the leading colleges of the west, this is only the second year in which such a practical course has been a requirement; and I regret to say that it has been rather difficult to excite the proper degree of enthusiasm in the students for the reason, no doubt, that the value of ophthalmoscopy in general diagnosis is not sufficiently impressed by teachers and writers on general medicine and surgery. Under these circumstances it is not surprising that comparatively few physicians are using the

ophthalmoscope as a matter of routine, even though it may give us valuable aid in the study of cases of injury and disease of the brain and its membranes, especially cerebral tumor and abscesses; disease and injury of the spinal cord; so called functional disease of the nervous system, including insanity; diabetes; nephritis; disease of the heart and of the blood; syphilis; tuberculosis; rheumatism; pyæmia and septicæmia; typhoid and many other fevers, etc., etc.

I know of no better way in which to interest you in this instrument than to show you how easily its use may be acquired and that without a teacher. I must, however, take you back to first principles and I hope that those of you who use the ophthalmoscope and are familiar with the optical principles upon which its use depends will bear with me while I explain these principles some what in detail for the benefit of those who have not given the matter their attention.

The eye, as you all know, is a camera in the form of a sphere. The cornea, the crystalline lens and the aqueous and vitreous humors constitute the refracting apparatus and correspond to the lenses of the photographer's camera. The iris is an automatic diaphragm and the inside of the globe is made black by the pigment of the uveal tract. The retina forms the most sensitive of plates upon which pictures are constantly formed, while the eyes are open, and conveyed to the brain as definite visual impressions through the fibers of the optic nerves and tracts. We are able at will to adapt the eye to vision at different distances by means of the accommodation which as you will remember consists in changing the focus of the camera by altering the convexity of the crystalline lens.

By the refraction of the eye we mean its power of focussing rays of light upon the retina. In emmetropia or normal refraction, parallel rays or those from a distance, are focussed upon the retina without any effort of accommodation. It is evident that if we would see the fundus of an eye, we must throw light through the pupil and upon the retina and receive the light reflected therefrom into our own eye in such a way as to form a sharp image. Helmholtz first accomplished this in 1857 by placing obliquely before the eye a simple plate of glass. Rays from a convenient lamp falling upon the glass plate, were in part, reflected into the eye and illuminated the retina. The rays reflected back from the fundus arriving at the glass plate were again reflected, in part, back to the source of light, but some of the light passed through the glass plate into his own

eye enabling him to see the illuminated fundus. Much more light is obtained by using a piece of glass with a mirror coating, a round hole through the coating enabling the observer to see through it. Still more light is obtained by using a concave mirror because the rays reflected from such a surface are rendered convergent.

An ophthalmoscope then consists essentially of a mirror with a hole in it; but our modern instruments are provided with a concave mirror and a revolving disc containing a series of convex and concave lenses which can be rotated at will behind the perforation in the mirror.

Figure 1. represents the path of the rays when the ophthalmoscope is used in the *direct method*. In this method the observer sees the eye just as he would see an object through a convex glass, or simple microscope. The image of the eye-ground is a virtual one; that is, it seems to be behind the eye. It is magnified and erect.

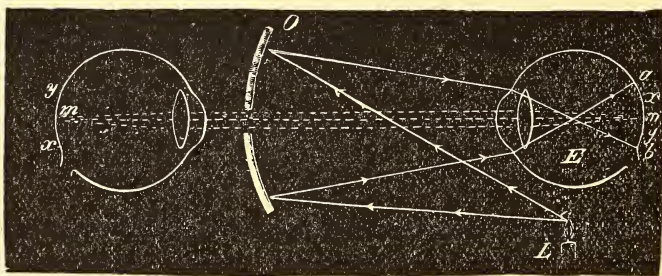


Fig. 1. Formation of the image in the direct method of ophthalmoscopy.

From the candle *L* the divergent rays falling on the mirror *O* are rendered convergent. Passing through the refractive media of the eye they are rendered still more convergent, and come to a focus in the vitreous humor; diverging again they form on the retina the illuminated circle whose diameter is *a b*. If this eye is emmetropic, rays from the points *x* and *y* will pass out of the eye into the eye of the observer. All the rays from the point *x* will be parallel. Rays from the point *y* will also be parallel. No image is formed; but the rays continue their course, and, entering the eye of the observer, come to a focus on his retina at the points *x'* and *y'*. Rays from the point *x* in the patient's eye unite at the point *x'* on the observer's retina. In a similar manner rays from the point *y* in the patient's eye unite at the point *y'* in the observer's eye. These rays projected backwards, seem to lie in their true position.

Rays from the middle point of the patient's eye unite on the middle point *m* of the observer's eye, and are projected backwards to the point from which they originated. The point *x*, above *m* in the patient's eye, is represented by *x* in the observer's eye below the middle point *m*. The point *y* below *m*, in the patient's eye, is represented by *y* above *m* in the observer's eye.

It is evident from a study of the above diagram that in order to see any details in the fundus of a patient's eye, the surgeon's eye must be in a condition to focus parallel rays of light upon the retina. In other words it must be emmetropic and he must be able to relax his accommodation as in distant vision: but we are all so thoroughly habituated to the use of the accommodation in looking at things close by that the first thing we have to learn in using the ophthalmoscope is to break this habit—to relax the accommodation at will so that the eye

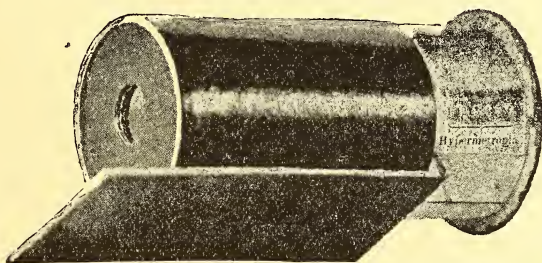


Fig. 2. Queen's Model of the Eye for Ophthalmoscopic Practice,

of the surgeon placed close in front of the patient's eye is in a condition to receive parallel rays of light and to focus them upon the retina. In order to acquire this ability I have found it of service in approaching the patient or the eye model in the dark room, to stare at the black wall as if looking into vacancy.

In our class work at Rush College, we have first given the students plain, perforated mirrors and pill-boxes with printing in the bottom and an aperture in the cover corresponding to the pupil of the eye and they have practiced in the dark room getting control of the light. They have also practiced the proper position in which the ophthalmoscope should be held—the handle held easily in the hand, the finger upon the side, and steadied by resting it against the nose and brow in such a way that whenever it is put up it comes naturally in position for the eye to see through the aperture. Then each student

has taken his ophthalmoscope and gone through the same maneuvers with the pill box.

We also use a schematic eye, made by Owen & Co., constructed upon suggestions made by Dr. Wm. Thomson, of Philadelphia, several years ago. It is in accordance with strict mathematical formulæ, and consists essentially of two paste-board tubes, one sliding into the other, the first one containing in the front part a convex lens of twenty diopters, the focal distance of which will therefore be fifty mm. At the back of the sliding tube there is a picture representing the retina, which can be brought nearer to or farther from the lens representing the refractive media of the eye. By this movement all refractive states of axial ametropia up to 6 D. hypermetropia and 6 D. myopia can be exactly reproduced, and are read off by means of a scale on the sliding tube.

Each student has been asked to provide himself with one of these models to practice upon at home as well as in the dark room in the college laboratory. There we have standards upon the top of which are three of these schematic eyes; one is emmetropic, one is hyperopic and the other is myopic. Students have been advised to practice first the examination of the hyperopic eye, because it is easy to see the details of the fundus without complete relaxation of the accommodation. When they are able to partially relax the accommodation and see the fundus of the hyperopic eye easily, they are advised to practice upon the emmetropic eye; first approaching from a distance, staring at the blank wall behind the model and gradually relaxing the accommodation. Suddenly they see the details of the painted fundus. When one is once able to do this, subsequent efforts are rendered very easy. Then we have them practice upon the myopic eye and they very soon discover that it is quite impossible to see the details of the retina without employing the concave lenses which are contained in the ophthalmoscope. This is readily understood when we consider the path of the rays of light coming out from the myopic eye.

They come to the surgeon's eye convergent and must be made parallel or divergent by passing through a concave lens before they can be made to focus upon his retina. For this reason we have in the revolving disc of the ophthalmoscope a series of concave lenses which can be rotated at will behind the aperture of the mirror. Likewise if the surgeon is myopic he must in using the ophthalmoscope, either wear his correcting glasses, or as is more convenient, turn into the aperture of his

instrument a lens equal in strength to the degree of his myopia. If the surgeon be hypermetropic he may first render his eye emmetropic by turning into the instrument a convex lens of proper strength.

If we desire to estimate the degree of myopia with the ophthalmoscope we may do so by finding the weakest convex lens through which we can see the details of the eye ground clearly after allowing for error in our own eye and completely relaxing the accommodation. Likewise we may estimate the amount of hypermetropia in an eye under the influence of a mydriatic by finding the strongest convex lens with which we can see the fundus clearly. Unless we have perfect control of our accommodation, at all times, it is evident that the measurements cannot be depended upon; and the surgeon must also know the refraction of his own eyes and allow for any defect.

In using the ophthalmoscope by the indirect method we interpose, between the instrument and the patient's eye a convex lens of about three inches focus and turn into the aperture of the ophthalmoscope a convex lens of ten inches focus—a real, inverted image of the interior of the eye is found and the method is similar in principle to that of the compound microscope.

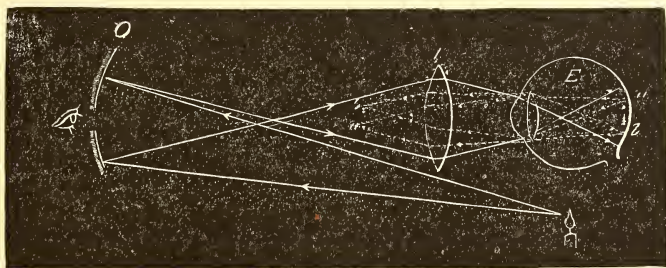


Fig. 3. Formation of the image in the indirect method of ophthalmoscopy.

The ophthalmoscope mirror *O* (Fig. 3) is held at a considerably greater distance from the patient than in the direct method. The rays from the candle come to a focus before reaching the eye, or object-lens. Then they diverge, and, passing through the object-lens *L*, are rendered convergent. After traversing the dioptric media of the eye, their convergence is increased, and once more they unite somewhere in the vitreous humor, from which point they diverge and form a circle of illumination on the retina. Their course, in passing

from the candle until they reach the retina, is shown by the arrow-heads in the figure.

A portion of the retina, a to b , represented by the arrow, forms an image, $b' a'$, between the lens and the observer's eye, represented by the inverted arrow. Rays from the point a , on the upper part of the retina, pass out of the eye parallel to each other. After passing through the object-lens l , they are rendered convergent and come to a focus at the point a' in the lower part of the inverted arrow. In the same way, rays from the point b on the lower part of the retina are parallel on passing out of the eye, but are rendered convergent by the lens l and come to a focus at a point b' in the upper part of the inverted arrow. It is this *aerial image* that the observer sees, and not the eye ground of the patient. Rays from this image are focussed on the observer's eye, just as rays from the retina are focussed in the direct method, i. e., the rays from the point a' are focussed on a higher portion of the observer's retina, and rays from the point b' are focused on a lower portion. They are likewise projected back to the points in the image from which they originated. (De Schweinitz).

By the direct method the objects seen are magnified about fifteen diameters, but in the indirect method we obtain a view of a much larger portion of the retina at one time, magnified about four diameters. As in microscopy it is best to examine specimen first with low power, so in ophthalmoscopy it is best to use first the indirect and then the direct method in every examination.

In the choice of instruments, I give my preference to those of the Knapp model having the circular, fixed mirror, and containing about fifteen lenses. Such an instrument can be had for about ten dollars and will not only last a life time, with good care, but is sufficiently elaborate for any examination which the general practitioner is called upon to make.

There are a number of atlases of ophthalmoscopy—that of Jæger is most elaborate, but I know of no better guide for the student and general practitioner than “Medical Ophthalmoscopy” by Growers, already referred to.

EXPERIMENTAL AMYLOID DEGENERATION.

BY N.P. KRAWKAW.

(FROM THE LABORATORY OF GENERAL AND EXPERIMENTAL PATHOLOGY OF THE IMPERIAL
MILITARY ACADEMY OF MEDICINE IN ST. PETERSBURG.)

Abstracted from *Archives de Medicine Experimentale et D'Anatomie Pathologique*, Tome viii, 1896, p. 106, by H. G. Wells, '98.

Up to the present time the study of amyloid degeneration has been confined to post mortem specimens in which the different degrees of the degeneration, together with the presence of other lesions, renders the stages of the process very indistinct. Experimental works on this subject have never been attempted, which perhaps explains our very limited knowledge of it. A few accidental cases occurring in laboratory animals have been reported, but the degeneration occurred in animals experimented upon with some entirely different object in view.

One of the first cases of this kind was reported by Hirshfeld, who found a diffuse amyloid degeneration occurring in a rabbit dead from the effects of a suppuration lasting six weeks and caused by inoculation of pus microbes. The microbes in this case were obtained from a man suffering from caries of the bones, and after whose death the kidneys were found to have undergone amyloid degeneration. Bouchard and Charrin have described two cases of amyloid degeneration in rabbits submitted to repeated inoculation of the bacillus pyocyaneus.

Czerny has produced amyloid degeneration in two dogs by subjecting them to a long continued, aseptic suppuration, produced by repeated inoculations of turpentine, thereby proving that the amyloid change is altogether independent of bacterial action. He also found in the pus corpuscles and leucocytes of these animals a substance apparently not glycogen, and giving the characteristic reaction for amyloid material with iodine and sulphuric acid, although failing to give the equally characteristic reaction with the aniline stains. Since the presence of this substance accompanied amyloid degeneration the possibility of its being an early stage of amyloid material which is carried to and stored up in the various organs, is strongly suggested. This idea would imply that the amyloid change is an infiltration and not a degeneration.

This form of degeneration is very common in our larger domestic animals, in fowls and pheasants and especially often in the horse where it occurs frequently in the liver, rendering this organ so soft and friable that fatal rupture often occurs. In all these animals the degeneration is usually secondary to some chronic infections or wasting disease.

With this series of cases of amyloid degeneration as a foundation, the author has carried on a number of experiments with the object of studying the changes as they occur when their production is under the control of the observer. The animals were subjected to prolonged suppurations produced by repeated inoculations of *micrococcus pyogenes aureus*, this method being chosen as bearing the most direct relation to its common occurrence in man after tuberculosis and syphilis when a mixed infection with the pus microbes has occurred.

Rabbits in good health were chosen and inoculated with constantly increasing quantities of a bouillon culture, beginning at first with $\frac{1}{2}$ c. c. Soon the animals would reach such a degree of immunity that they would scarcely react to 30 c. c. of a culture, 1 to 2 c. c. of which would have at first killed them. This gradual acquirement of immunity seemed to be the most favorable condition for the appearance of amyloid degeneration, animals succumbing to a few large doses rarely showing the change. The history of a single rabbit, as follows, will be a fair sample of the results obtained in the whole series:

Rabbit no. 1, weight, 1556 gms. Submitted to 4 inoculations of 1 c. c. for the first 3 times and 5 c. c. for the last. Died in 6 weeks, much exhausted. Weight of body 779 gms.

The last week the urine was acid and contained albumin; stools watery. *Spleen*—shrunken, anemic, soft, tearing readily, cut surface not showing the characteristic amyloid brilliancy. Microscopic examination showed amyloid degeneration marked in the pulp and in the periphery of the follicles; giant cells containing amyloid present, marked accumulation of pigment. Lymphoid elements contain no amyloid. *Liver*—atrophied and anemic. Slight amyloid degeneration of intralobular capillaries, marked albuminoid degeneration of the liver cells. *Small intestine*—walls thin, mucous membrane pale, marked amyloid degeneration of the villi and glands of Lieberkuhn, principally in their capillaries and connective tissue. *Kidneys*—traces of amyloid in *membrana propria* of the convoluted tubules. *Supra-renal capsules*—traces of amyloid in med-

ullary substance. No traces of amyloid in the abscess, nor in the muscles of the heart and trunk.

The amyloid material of the rabbits gives all the characteristics of the human amyloid and when isolated seems to be the same chemically. The microscopic appearance of the organs, however, differs from that of man in the advanced stages. The spleen is generally soft and shrunken, the cut surface does not give the characteristic brilliancy; the liver resembles more an albuminoid degeneration.

In the animals experimented upon the degeneration seemed to begin in the spleen, often being very advanced here when not found in any other organ. This is apparently true in man as well. In rabbits the degeneration is more marked in the gastro-intestinal canal than in the kidney or liver, the salivary glands seeming to stand next in order to the spleen. The idea that the blood forming organs are not invaded is supported by these experiments, for the marrow of the bone, probably the most important of all, was never found amyloid. They, however, showed that it is possible to have an amyloid degeneration localized in a single organ or in a part of that organ, as the follicles of the spleen.

The degeneration was especially observed in the capillaries, arteriole walls and connective tissue elements. The cells of the organs seemed never to be invaded, except those of the spleen. The presence of giant cells in the amyloid spleen is accounted for in different ways. The author is inclined to believe that they absorb the amyloid substance as a body foreign and injurious to the organism. This function would imply that the resolution of amyloid material is possible and although contrary to the general idea as obtained from clinical information, yet there is much to favor this supposition. Amyloid degenerations in various neoplasma has been observed in parts removed by operation and later it has been found that the remaining material has disappeared. Litter has also found that fragments of amyloid kidneys placed in the abdominal cavity of animals are absorbed and here giant cells containing amyloid material are numerous.

Alumni Department.

JOHN MILTON DODSON, A. M., M. D., EDITOR:

MEMBERSHIP IN THE ALUMNI ASSOCIATION OF RUSH MEDICAL COLLEGE is obtainable at any time by graduates of the College, providing they are in good standing in the profession, and shall pay the annual dues, \$1.00. This fee includes a subscription to THE CORPUSCLE for the current year. This journal is the official organ of the Association.

Dues and all communications relating to the Association should be sent to
JOHN EDWIN RHODES, M.D., Sec'y and Treas., 34 Washington St., Chicago

To The Alumni Association of Rush Medical College.

34 Washington Street, Chicago, May 1, 1896.

The following program has been arranged for Commencement Week of Rush Medical College, May 25, 26 and 27, 1896.

On Monday, May 25, at 10 a. m., a Clinic in General Medicine will be given by Prof. Henry M. Lyman in the Upper Amphitheatre of the College.

At 2 p. m., a Surgical Clinic will be given by Prof. John B. Hamilton.

At 4 p. m., the Class Day Exercises of the Class of 1896 will be held at the College.

In the evening the Class of 1886 will hold a Reunion in celebration of the tenth anniversary of their graduation. A Reception to the Class will be given by Dr. A. J. Ochsner, President of the class, at his residence, 710 Sedgwick Street, from 7 to 10 p. m.

On Tuesday, May 26, at 9 a. m., an informal Reunion of the Alumni will be held at the College. At this hour tickets to the Reception in the Laboratory Building will be issued to the Alumni and members of the Graduating Class.

At 10 a. m. will occur the Annual Scientific Meeting in the Upper Amphitheatre. For this meeting an unusually attractive program is offered this year, and there should be a large attendance of the Alumni.

1. Auto-intoxication in Surgical Cases.

Prof. Roswell Park, M. D., Prof. of Surgery, University of Buffalo, N. Y.

2. Pulmonary Rheumatism, with Report of Cases.

Dr. W. H. Washburn, '77, Milwaukee, Wis.

3. Injuries of the Head.

Dr. L. J. Adair, '70, Anamosa, Ia.

4. Sporadic Cretinism, or Congenital Myxoedema.

Dr. Jas. B. Herrick, '88, Chicago, Ill.

5. Appendicitis with Cases; New Method of Operation for.

Dr. H. A. Winter, '73, Saybrook, Ill.

From 12 to 2 p. m. a Reception will be given to the Alumni and members of the Graduating Class in the Laboratory Building. A light luncheon will be served. The laboratories of Practical Anatomy, Chemistry, Histology, Pathology, Bacteriology and Experimental Physiology will be open for inspection. Students will be at work on subjects of special interest, and demonstrations will be given.

From 2 to 4 p. m. a Surgical Clinic will be given by Prof. N. Senn.

In the evening arrangements have been made for a Theatre Party, one of the attractive social features of the past two years. The Alumni and friends will be seated with those of their respective classes, as far as possible. The great comedy success, "The Gay Parisians," to be given at Hooley's Theatre, has been selected.

On Wednesday, May 27, from 9 to 11 a. m., a Gynecological Clinic will be given by Prof. J. H. Etheridge.

COMMENCEMENT DAY.

At 2 p. m. the Graduating Exercises of the Class of '96 will occur at Central Music Hall.

At 7 p.m. a Reception and the Joint Banquet of the Faculty and the Alumni will be given at the Auditorium Hotel. Address are promised by Dr. J. E. Cox, Prof. John B. Hamilton, President, Wm. R. Harper, of the University of Chicago, and Hon. Luther Laflin Mills. The exercises will be enlivened by music by the Rush College Quartette and the Rush College Mandolin Club. Dr. W. A. Gordon, '59, Oshkosh, Wis., will preside.

Tickets for the Theatre Party have been arranged for at the reduced rate of one dollar for the best seats. The tickets for the Banquet will be one dollar and fifty cents per plate.

All who anticipate attending the Theatre Party or the Banquet should notify the Secretary at once by word or letter, as it is necessary to know just how many are to be provided for.

Those who engage tickets may procure them of the Sec-

retary, at the College Building, after 9 a. m. on Monday and until 12 m. on Tuesday.

The Association dues of one dollar include a year's subscription to "The Corpuscle," our official magazine. This amount may be sent by mail or paid at Commencement Time.

Make a special effort to be present during the week.

Yours for "Old Rush,"

John Edwin Rhodes, Secretary.

'87.—Dr. D. L. Sigworth has been elected surgeon to the Iowa Prison at Anamosa, Iowa.

'91.—Dr. A. M. Earl, of Monica, Ill., is spending a few days at Rush in attendance upon clinics and lectures. He has taken into partnership with him Dr. C. L. Menefu of the class of 1895.

'91.—Dr. Geo. H. Shrodes has removed from Aberdeen, S. D., to Excelsin, Minn., and has been appointed local surgeon of the M. & St. Louis Ry., at that place. He is reputed as having a nice business at Excelsin.

'91.—The friends of Dr. McClanahan will feel sad to know of the death of his wife at Red Lodge, Montana, March 15th. Mrs. McClanahan was formerly a nurse in this city.

Dr. Miller, of Red Oak, Iowa, ex-interne of Presbyterian hospital, was married lately to Miss Jenks who was formerly a nurse. We extend hearty congratulations to the doctor.

'91.—Dr. P. A. Lillie has removed from Sterling to Tom-pice, Ill.

Victor E. Loughridge was born in Rensselaer, May 28, 1863. Saturday morning, Mar. 21st, 1896, at 2 o'clock A. M. he expired at the age of 32 years, 9 months and 22 days. He was the only son of Dr. James H. and Candace L. Loughridge, and excepting one daughter, the'r only child. His father, one of the best known physicians in northern Indiana, died only last August, after a long and useful life. Victor was educated in Rensselaer public schools, completing the high school course as a member of its first class, that of 1880. In the fall of the same year he entered the Ann Arbor, Mich., high school graduating in 1881; and the same year entered the class of '85 of the Michigan University, of the same place. In 1888 he graduated at Rush Medical College, Chicago, and immediately

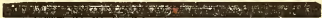
thereafter entered the practice of medicine in partnership with his father.

Oct. 10, 1888, he married Miss Alice Barnum, of LaPorte, Ind., and whose death occurred July 9th, 1889. She left an infant daughter who did not long survive her. March 7th, 1894, he married Miss Farrie Wilcox, of Surrey, who survives him as does also an infant daughter, 7 months old. His other living near relatives are his mother and one sister, Miss Blanch Loughridge.

"Doc Vic" as everybody called him, was a well read and successful physician. Personally and socially he was popular with all classes, and of such genial and friendly disposition that he literally had not an enemy in the world. He inherited his father's taste for the natural sciences, and had he lived would have succeeded him as our great local authority on birds, animals rocks and plants.

He was a member of the Rensselaer Lodge, Knights of Pythias, and of the Uniform Rank, of the same order. Also of Prairie Lodge of Free Masons, and of the Independent Order of Foresters.

His funeral was held Monday afternoon at his mother's residence, which adjoined his own, and was very largely attended. Brief religious services were conducted by Revs. M. R. Paradis and R. D. Utter, pastors respectively of the Presbyterian and M. E. Churches. The burial services at the grave, in Weston cemetery, were conducted by the Knights of Pythias. The pall bearers were C. C. Warner; Chas. G. Spitler, J. J. Hunt, B. G. Fending, A. R. Hopkins and B. K. Zimmerman. The various floral tributes were beautiful and profuse in quantity.



The Corpuscle.

EDITORIAL COMMITTEE.

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J. E. LUCKEY, '97, Sec'y and Treas.

T. R. CROWDER, '97. FRED. BARRETT, '97. E. L. McEWEN, '97.

Communications relative to advertisements and subscription (Subscription price \$1.00 per annum), should be addressed to the publisher. Remittances should be made by money order draft or registered letter payable to "THE CORPUSCLE," and addressed to Fred C. Honnold, 877 Jackson Boulevard.

RUBY RED AND BLACK: Colors of Lake Forest University. ORANGE: Color of Rush Medical College.

Farewell Before the next issue of the CORPUSCLE the class
Ninety-Six. of '96 will have moved on and out from its allotted place among us and assumed its station in the vast number of the Alumni of Rush. In parting with this class, which claims many of our firm and truest friends, we wish it God speed. We hope and trust that, as the result of its labor, great achievements may be given to medical science. We also hope that the conduct and life of each individual man will result in elevating the intellectual and moral standard of all with whom he comes in contact. Serve the medical profession to the best of your ability, be good citizens, be *men*.

Cook County The fact that Rush men did not make a better
Hospital Appoint-ments. showing in the recent Cook County examinations should not be taken as casting disgrace upon Rush or the class of '96. There can be no doubt but that the examinations were held upon a strictly honest basis and that those who were best prepared upon the subjects, received the appointments. However, it does not follow that he who can best pass examinations upon the technicalities of the various branches is better prepared to practice than he who has made himself familiar with the important and more essential points mastered through repeated clinical observation. It is known by all that the clinical advantages of Rush are far superior to those of all rivals in Chicago. On account of this fact, in many instances

is the didactic work in the senior year sacrificed in order that the student may acquaint himself more perfectly with clinical manifestations. In the following years, with the four year's course perfectly arranged and the Cook County Quiz Class in charge of a competent committee appointed by the faculty most flattering results may be hoped for.

We congratulate rival colleges on their successful achievements and also those men of Rush who shall represent their Alma Mater in Cook County Hospital. We also desire to congratulate '96 on the large number of hospital positions which have been successfully competed for by members of this class.

**Change in
Tuition.**

The rapid advance made by Rush during the past few years is exceedingly gratifying to her friends and patrons. The system of recitations is rapidly developing a very thorough class of students. The laboratory is a mighty factor in teaching habits of close observation which is such an essential feature of a thoroughly qualified physician.

The future of the college is exceedingly bright. With a finely qualified faculty, ever on the outlook for the best, be it the newest or the oldest, the richest success is sure to attend her efforts.

The expenses at Rush are less than at many other colleges offering poorer advantages.

We are glad to note in the "First Edition of the Fifty-fourth Annual Announcement" of Rush that a general fee of one hundred and twenty-five dollars is to be charged instead of the former fee of eighty-five dollars and extra fees for special courses. The expense of a year's schooling is not increased by bunching the fees and many disadvantages of the old system will be removed.

The exact amount of a year's fees will be known. Every-time a special course is called there will not be an indignation meeting over the "exorbitant laboratory fees." There will not be a tendency on the part of the students often to postpone the taking of a special course simply to avoid paying the fee at once. Altogether this new arrangement will prove much more satisfactory to both college and students.

The '96 Pulse.

On March 31, 1894, a meeting of the Freshmen of Rush Medical College was called by President Eckard for the purpose of electing a board or committee to publish the second volume of the *Pulse*. The meeting resulted in the election of Messrs. Carson, McNary, Hobbs, Larned, Duncan,

Bullen, Martin and Witte. These men were informed of their election by President Eckard and told to go ahead and publish the book.

The first meeting of the board was held March 31 and meetings were held each week thereafter for over a year with the exception of the summer vacations.

On April 9, '94, Mr. Witte resigned from the board and Mr. Martin not returning to College in the fall the board voted not to put in two new men but carry on the work with the six men remaining.

The Board elected the following officers to wit:—Carson, chairman; Duncan, editor; McNary, ass't editor and treasurer; Larned, secretary and business manager; Bullen, editor of locals; and Hobbs, artist. These men worked hard. On account of his familiarity with that kind of work Larned was elected to act as editor and compiler and passed on matter contributed, prepared it for the printer, wrote the "copy," read "proof" and arranged the pages and selected the binding. Hobbs drew all the pictures in the book, not photographs; McNary acted as treasurer (collected the money and paid the bills); Carson presided at meetings, and Bullen and Duncan wrote articles and contributed many of the jokes, etc.

After a year's hard work the *Pulse of '95* was the result. Acting on the advice of many friends, acquaintances and people supposed to "know," an edition of two thousand copies was published at a cost of \$1.45 per volume.

There were nearly eight hundred students in college; the secretary of the Alumni Association, Dr. Rhodes, had the addresses of three thousand living alumni of the college and so it was thought that out of [nearly four thousand alumni and under-graduates, an edition of two thousand copies would be a conservative issue. The students were canvassed and subscriptions taken, signed by them, at \$1.00 each. Three thousand circulars were sent to the alumni asking them to take one book each at \$1.15, post prepaid—(a book of three hundred and seventy-six pages, with many fine illustrations, pronounced by competent authorities the equal of *any* college publication *ever* issued and the *finest* thing ever compiled by students of a medical college)—and what was the result? Another case of "too many cooks" and of misplaced confidence in fellow man.

Of the five hundred student subscribers over one hundred actually repudiated their contracts and refused to take the book when it was offered to them. Of the three thousand

alumni solicited only about one hundred and fifty responded. The board was hopelessly involved and despair succeeded the high hopes and pride of its members. A year's agitation among the students striving to sell the books has accomplished nothing; the board is heavily in debt and one member, owing to time spent on the book, will be obliged to take another year in college.

The board has a debt of \$761.80 to pay in addition to the \$2120.00 already paid out for which the treasurer holds receipts. The assets real and nominal of the board are, bills due \$87.00, six hundred and ninety-one copies of the book and copper half-tone plates costing \$590, in the hands of the printers, which together with five hundred and ninety of the books they verbally and in writing have refused to give up until the balance of their bill is settled.

The entire class of '96 and the board has been threatened with suits for the remainder of the various bills due. There is a way out of all this trouble if the students would take it. The friends of the students (the faculty) have volunteered to take half the books if the students raise half of the amount needed to pay the debts. And if every man would buy a book the debt could be easily paid and the class and board cleared of the stigma that now rests on them of being "dead beats" and not paying their bills. The above statement is an accurate account of the present condition of the *Pulse* and we earnestly hope that the class will come to the rescue of the *Pulse* representatives before Commencement day.

Compulsory Four Year Course. The Illinois State Board of Health recently passed a law compelling every medical college to lengthen its course of instruction to four years, and recognizing degrees only from those colleges which comply with the law. This is a step which might well have been taken sooner and which will now be heartily welcomed by every first class medical institution of the state. Whether or not this law will fully succeed in abolishing those mushroom institutions established for the purpose of legitimizing professional advertisement and for selling degrees to professional quacks remains to be seen. It should at least succeed in greatly lessening their number. The people's rights should be protected even at sacrificing the student's convenience. No man should be allowed to practice medicine who is not willing to spend sufficient time and energy in preparation to become a competent physician. As the scope and efficiency of medical knowledge increases more time must

be spent in preparing for the practice of the art. Thirty years ago two years in a medical college were comparatively equivalent to four at the present time. We are not presumptuous in saying that the men who graduated then were not as competent in the first years of their practice as are the students who leave college today. But we must add to our knowledge what thirty years of experience has taught them and the last thirty years have doubled the scope of the medical sciences. There is not a possible excuse for quackery. Those who practice it are but social leeches. The world is running over with competent physicians. Society is for the most part unable to choose between the good and the bad. It has the right at least to demand that those who are to take human lives into their hands shall know something of the science that lies back of the art of treating its physical ills; and with any attempt to assert this right every medical institution which has an object worthy of its name will heartily sympathize.

Prerequisites to Specialties. We are living in the day of specialists. This is the natural sequence of the division of labor in every phase of human life. The benefits of such a condition to the commercial world may be summed up in dollars, but no power of man can compute its advantages in the realm of science.

Commerce must have men to attend to particular fields of its labor but it must also have men at its command who can take in whole continents when considering vast business ventures. Science needs men having an acquaintance with all her general principles so that they may direct investigation into the different channels of research. Medicine must have the general practitioner to classify patients for the specialist.

The specialist must know the relation of diseases in addition to the *broad* understanding of his own particular field of research and practice. The attainment of this proficiency requires much time and experience. It is right here that the young physician errs. He goes forth with a "sheep-skin" and the profound conviction that his modern training has rendered him peculiarly fitted to practice his profession in any of its numerous phases. With this feeling he jumps into a "specialty" at once without the years of general practice that older heads consider so very essential. Question him and he answers that he has spent more than twice the time in preparatory study than his old physician friends have who are now specialists. He feels that his superior college advantages

ought to count something in lieu of experience. And so they had; but there is a great difference between theory and practice. Necessarily, the college must give us theory almost altogether; life alone in its active application of knowledge gained, can give the desirable power that comes alone from practice. Without this power one is handi-capped even though his mind be filled with the richest lore culled from the most reliable store-houses of knowledge.

To be the best general practitioner is to be a man of the broadest medical knowledge. To have the broadest medical knowledge is to have an understanding of all the sciences bearing in any practical way upon it. This takes time and a good deal of it. It takes much reading and study—mixed, perhaps with “mid-night oil.” It means practice in the application of the knowledge gained.

To be a first class specialist is to be a first class general practitioner. Hence, it requires time and experience in addition to the most thorough preparatory education and no young man of far reaching sight will disregard these prerequisites.

Errata.

In the last issue of this journal appeared a short editorial containing some statistics of the sale of cigarettes and morphine in the city of Chicago during the year of 1895, together with some comments upon the largeness of their use. We made the mistake of saying that eighty per cent. of all the vast number of cigarettes sold contained opium in greater or less quantity. So the statistics said and we took for granted their correctness. Since the appearance of the last issue of the CORPUSCLE, however, we have taken occasion to look further into the subject and find it to be a very improbable thing that cigarettes contain opium at all. There are certain reducing substances in the tobacco, among them nicotine, which give chemical reactions resembling those of some of the alkaloids of opium. Upon this fact has been based the opinion of at least one competent investigator that he found a considerable quantity of opium in the common brands of cigarettes. His opinion was later withdrawn. Professor Haines has made repeated tests and has succeeded in completely demonstrating the absence of the drug so far as his investigations have gone. And upon no better authority than his do we care to rely for changing an erroneous opinion. Other chemists have verified the results of Professor Haines.

**Cook County
Quiz Class.**

Definite arrangements have been made in regard to the work of the County Quiz Class for next year. The matter has received the consideration of the faculty who have decided in favor of the continuance of the class under the direction of the college. At a recent meeting of the faculty a committee consisting of Professors Haines, N. Senn and Dodson was appointed to make arrangements and outline the work for the ensuing year. The class will be made up of those twenty-five men who have the highest grades for freshman and sophomore work. Beside this number, men of excellent standing but not included in the first twenty-five, who show a desire to take up the work and a willingness to devote the required amount of study will be permitted to join. We feel confident that this new arrangement will result favorably for the Rush contingency in Cook County Hospital.

Exit Editor.

With this issue of the CORPUSCLE the present editor-in-chief steps down and out. As he lays down the pen and looks back upon the results of his labors he cannot but regret his inability to have better served the interests of the CORPUSCLE and its readers. To such a great extent is the time of a medical student filled by the prescribed work—work that should be conscientiously performed if success in medicine is achieved—that it is difficult to find the requisite leisure to edit successfully a journal of the standard which the CORPUSCLE strives to maintain. As a parting word the out-going editor desires to thank the contributing members of the faculty for the courteous treatment which he has ever received at their hands and for their generous contributions; he desires also to thank the associate members of the board, who by their co-operation have greatly lightened his labors. The honors of the vacated office will be taken up by Mr. J. E. Luckey, '97, a man of sound judgement, combined with fine literary ability, in whose hands we are confident that the CORPUSCLE will flourish as never before. Although officially no longer connected with the CORPUSCLE we shall always look back with pride upon those days when we spent sleepless nights worrying about the next issue; we shall ever do all in our power to further the interests of the journal and wish it great success in the future.

An apology is due the Y. M. C. A. for the non appearance in our last issue of their article The omission was an error.

College Notes.

ATHLETICS.

The base ball season opened very auspiciously, the team winning its first three games by a large majority of scores. The first game—which was much of the nature of a practice game—was played with the West Division High School and most of the candidates for the team were given a trial during the game which resulted in a score of 9 to 4 in Rush's favor.

The next game on the schedule was with Armour Institute, and the following men, who have been selected to champion Rush's cause on the diamond, placed a game to her credit in the face of cold weather and high wind:

Hogeboom c., Blake p., Price 1st. b., Cooling 2nd b., Somers 3rd b., Stewart, s. s., Frost l. f., Plummer c. f., and Fales, r. f. In addition to these men, Wallace, Schultz, Wood, Griffith, Beebe and Dauser have played in some of the games and constitute part of the regular array.

The game with Chicago University was a nice exhibition of the national game, and although Rush was beaten by a score of 8 to 5, it was a good game, well contested throughout. The game which was scheduled with Lake Forest University was postponed and the Madison trip came next. This and the Beloit game resulted rather disastrously for our men, the scores for the respective games being 14—9 and 15—10.

A second bat crossing with Chicago University was scheduled for Tuesday, April 28th, but owing to the poor condition of the grounds was postponed.

Immediately after the commencement exercises, the team will start on its western trip which will include games with Omaha, Grinnell, Iowa City, Toledo, and Cedar Rapids. Mgr. Frost will carry twelve men and has vowed that the trip shall net a series of victories for Rush's banner.

It seems a pity that with all the other advantages the team possesses, they should be lacking in one of the essentials for making them strong, viz., a good field on which to practice. Laboring under the difficulties with which they have to contend in this direction, it is surprising that they play as well as they do, and the management deserves credit for the manner in which it has worked "against the tide" as it were.

On Tuesday the twenty eighth of April the Northwestern University sent forth a nine to compete with Rush but most of the time our men ignored their presence, being busy running bases. Occasionally, however they desisted for a little while to let Blake and Dancer exercise their hypnotic influence. The Evanstonians managed to resist the latter however, sufficiently to run in half a score—of scores, while Rush went them half a dozen better.

The game on Friday, May 1st was with the Illinois Cycling Club and they evened up with us for the beating the foot ball men gave them in the fall, to the time of eight to five. Somers and Brown as the battery kept their opponents guessing throughout what proved a very interesting game.

The game Thursday, May 7, resulted in a score of 8 to 4 in favor of Chicago University.

It is rather early to begin the discussion of foot ball, but the management is already busy, having begun the preparation of the schedule for the fall of 1896, and called a meeting for the election of a captain for the coming season. With Rush working independently she will put forth a team that will be known throughout the west.

—On Saturday evening, the 18th of April, a final banquet was given by the Instructor's Association of the college. The occasion was the source of much pleasure to all present, but, however was not free from sadness, arising from thoughts of the recent bereavement which Rush and the Association had suffered. All felt keenly the absence of the late well-known and beloved Dr. Bishop, and many were the whispered conversations concerning his untimely death.

The Association president, Dr. John Edwin Rhodes, presided and acted as toast-master, modestly insisting, however, that Prof. Truman W. Brophy should supply the honored place at the head of the table. Prof. E. Fletcher Ingals, Prof. Walter S. Haines and Prof. John Milton Dodson were invited as guests of the Association. Dr. Merriman's kindly face occupied a prominent place at the festive board, and a right hearty welcome was the good doctor accorded, too. Dr. Bouffleur was present, good-natured and jovial as ever, and doctors Jay, O'niell, Senn, Tyler, Coolridge and Weber contributed not a little to the general round of pleasure. The banquet was held in the spacious rooms of the Chicago Athletic Association and was served in the correct and elegant manner so characteristic of that club.

Later in the evening, through the kindness of Dr. Rhodes,

who is a member of the club, the privileges of the club house were extended to the Association members, many of whom enjoyed an excellent vaudeville entertainment given in the gymnasium, the rest being shown through the apartments. The evening was thoroughly enjoyed by all and with visions of sick patients, anxious wives and grading of final examination papers forcing themselves at last through all the enjoyment, an adjournment was reluctantly made. This association is now on a firm basis and its worth is making itself so apparent that its originators are well pleased, but there is still much more to be done, and an earnest, individual interest and activity from all the members is looked for.

SAMUEL C. BEACH, Sec'y and Treas.

Professor Cotton has been ill for some time but has sufficiently recovered to undertake the journey to Atlanta to attend the meeting of the American Medical Association.

Wednesday, April 8th, Professor Etheridge gave a gynecological clinic before the Tri-State Medical Society in which he was assisted by Dr. Henrotin of the Chicago Poly-clinic. Professor Etheridge performed a laparotomy with his usual brilliancy in which the tubes and ovaries of both sides were removed. This was succeeded by a vigorous hysterectomy performed by Dr. Henrotin. Many visiting physicians were present, for whom the first three rows of seats in the upper amphitheatre were reserved. The following day, Thursday, April ninth, the seats were again reserved for members of the society and Professor Senn gave a fine surgical clinic before them. Many cases of great surgical interest were in the arena, and the operative material was exceptionally good.

On the evening of Wednesday, April 8th, H. A. Berry, '96, was struck by a street car while crossing Ogden avenue, suffering a fracture of the malar bone. He was taken to Cook County Hospital where his wound was dressed. He was out of the hospital after a few days and made an uneventful recovery.

If the middlers did not pass the recent final in medicine it will not be the fault of Vaughn, '97, who entertained the class by whistling *The Mocking Bird* with variations, in a most pleasing manner, just prior to the examination.

Professor Lyman recently made a flying trip to Washington to attend the eleventh annual meeting of the Association of American Physicians which convened from Apr. 30th to May 2nd. This Association is the most exclusive of its kind

in America, being composed of one hundred of the leading physicians of the United States. There are only three physicians in Chicago who are members of this organization, Prof. H. M. Lyman, Dr. I. N. Danforth and Dr. Frank Billings.

COOK COUNTY HOSPITAL INTERNES.

The following passed successfully the recent examinations for places as internes in Cook County Hospital.

REGULARS.

1. Cook, Chicago Medical College.
 2. Simpson, " " "
 3. Miss Young, Women's Medical College.
 4. Brennecke, Rush Medical College,
 5. Miss Jackman, Women's Medical College.
 6. Bullen, Rush Medical College,
 7. Lockwood, Chicago Medical College.
 8. L. W. Brown, Rush Medical College.
 9. Ford, Chicago Medical College.
 10. Humiston, College of Physicians and Surgeons.
 11. Heinicker, Chicago Medical College.
 12. McGrady, College of Physicians and Surgeons.
- Alternates—Hunter, Rush Medical College.
Miss Field, Women's Medical College.

HOMEOPATHS.

1. Cromwell, Chicago Homeopathic College.
2. Patton, " " "
3. McBurney, " " "
4. Walker, " " "

Alternates—Holly, Hahnemann,
Whipple, "

ECLECTICS.

1. Robertson, Bennett Medical College.
2. Engels, " " "
3. Bates. " " "

Alternate—Duckett.

The following men passed successfully the examinations for Presbyterian Hospital, given in order of grade, 1, Witte; 2, Harvey; 3, Smith; (H. S.) 4, Beebe.

In addition to the above named, the following members of the graduating class have received hospital positions:

Illinois State Hospital for the Insane—Dooley, Bourne, Gemmell, A. L. Miller, Heise, Kremel, King, Newton, Willhite and Johnson.

St. Augustana Hospital—Strand, Ochsner.

Alexian Brothers Hospital—Hutchins.

St. Elizabeth's Hospital—Convery, Rouleau and Wallace.

PROGRAM OF FIFTY-THIRD COMMENCEMENT WEEK OF RUSH
MEDICAL COLLEGE.

Sunday, May 24th, 4 p. m.

Doctorate Sermon.....College Amphitheatre
By N. D. Hillis, D. D.

Monday, May 25th, 4 p. m.

Class-Day Exercises.....College Amphitheatre
Prayer.....Eduard J. Witt
Song.....Class Quartette
Class History.....Edward A. Miller
Music.....College Mandolin Club
Class Poem.....T. Francis Conroy
Song.....College Glee Club
Class Essay.....Henry A. Berry
College Song.....Class
Presentation of Class Tablet... William L. Palmer
Acceptance.....Prof. E. L. Holmes
Song.....Class Quartette

Tuesday Evening, May 26—Theatre Party.

Wednesday, May 27th, 2 p. m. Commencement Exercises
Central Music Hall.

Wednesday Evening, May 27th, Alumni Banquet.

CLASS OFFICERS OF '96.

William Lucius Palmer, President.

William Aldovard Metzger, 1st Vice President.

George Henry Vaupell, Ph. G., 2nd Vice President.

Daniel Adam Orth, Recording Secretary.

Thomas Walter Gillespie, Corresponding Secretary.

Neal Walter Culbertson, B. S., Treasurer.

Sumner Arthur Edmunds, Valedictorian.

Edward A. Miller, B. S., Historian.

Thomas Francis Conroy, A. M., Poet.

Eduard Johann Witt, Chaplain.

Henry Abram Berry, B. S., Essayist.

Spencer DeWitt Beebe, Choirister.

Walter Earl Richardson, Sergeant-at Arms.

EXECUTIVE COMMITTEE.

Henry Slaymaker Smith, B. S. Chairman; Lewis Jefferson
Daniels, Tolbert Fanning Hill, Walter Guy Law, Robert Cooper
Fullenwider.

CONCERT OF THE RUSH MEDICAL COLLEGE MANDOLIN CLUB.

April 10th in the College ampitheatre the Mandolin Club gave a concert which was a great social and financial success. Among the appreciative audience of about four hundred people the Faculty was well represented.

In a program where all do so well, it is difficult to mention each one to whom praise is due. It is not, however, detracting from the excellent performance of the club as a whole to call attention to the very creditable work of the leader, E. F. Jones, both as director and soloist.

Miss Louise Brehany rendered two solos in a most acceptable manner, being recalled by the audience.

Mr. Prible and sister shortened the intermission by a piano duet which proved the musical ability of the performers. As an "extra" the "boys" showed how *some* of the students pass the time in their rooms.

Mr. Rucker gave two readings and made a decided hit in "The Morning Argus Obituary Department."

The Mandolin Trio by Messrs. Jones, Fehr and Gee was well rendered. The R. M. C. Quartette, Messrs. Johnson, Smith, Beebe and Brode appeared to the best advantage and were recalled several times.

A few words of criticism might not be out of place, but it is not our intention to give it. The club is something the students should be proud to support by money and influence. Next year great things can be expected from this organization.

The ladies mentioned below were patronesses of the occasion:

Mrs. W. J. Chalmers, Mrs. William C. Pullman, Mrs. Christoff Hotz, Mrs. Jos. Sossman, Mrs. A. T. Weeks, Mrs. B. Dorr Colby, Mrs. Plowden Stevens, Mrs. Oscar J. Price, Mrs. Geo. B. Swift, Mrs. Geo. Birkhoff, Mrs. Chas. Fitzsimons, Mrs. E. A. Birkhart.



ELLSWORTH D. WHITING, A. B.
(RETIRING EDITOR OF THE CORPUSCLE.)

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MEDICAL DEPARTMENT LAKE FOREST UNIVERSITY.

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AN AUTO-INFECTION, ESPECIALLY IN SURGICAL PATIENTS.*

BY ROSWELL PARK, A. M., M. D., (M. D. HON. RUSH.)

PROFESSOR OF SURGERY IN THE MEDICAL DEPARTMENT, UNIVERSITY OF BUFFALO.

Read before the Annual Scientific Meeting of the Alumni of Rush Medical College.

One of the greatest advances made in recent pathology has been the establishment of the fact that a great many of the morbid conditions from which the human race suffer are those due to causes arising entirely from within their own systems and in consequence of deficiencies of elimination or of perverted physiological processes which, in large degree, are themselves the result of errors and indiscretions in diet, in manner of life, in habit, etc. That these general facts have been recognized for centuries is perhaps a credit to the powers of observation of practitioners of past generations. Exact knowledge, however, has come only with exact laboratory methods of research and most pains-taking study of the secretions and excretions, both under normal and morbid conditions. The subject of auto-intoxication has been too commonly relegated to the domain of internal medicine, and has been supposed to be one in which the surgeon, as such, need take only passing interest. This is a most sad and egregious error, however; and that surgeon will prove himself the best master of the situation who is thoroughly conversant with all that the general topic of auto-infection comprises and implies, for he will find that his surgical patients do well or badly just in proportion as he maintains

*From advance sheets of Park's Text Book of American Surgery.

equilibrium between ingestion and egestion, or as he realizes that retained excrementitious products are among the most active predisposing causes of what may a little later appear as distinct surgical sepsis. For this purpose, therefore the present chapter is included in a distinctly surgical text book. It includes not only the interesting topics of the ptomaines and leucomaines, but comprises much more, as shall be seen.

It pertains in large degree to the intimate secrets of the chance meeting of man and microbes, which are so constant, yet so often without result. In the condition of auto-intoxication is to be found much of the explanation why infection, which apparently occurs so easily, is yet relatively so uncommon. It brings up the statement so emphasized by Bouchard, that physicians ought not to permit themselves to be occupied alone with the research after microbes, but that they ought to busy themselves as well with investigating the circumstances which disarm the organism against microbic invasion. The alkaloids are by no means the only poisonous products which the human body may produce and retain. The most important excrementitious material of all—i. e., carbonic dioxide—could not be retained in the organism for more than a few moments without death as the inevitable consequence. The various soluble ferments elaborated by certain glands may exert deleterious influence, both local and general; and in the saliva are also found products which are not ferments. The biliary acids, also, if they do not find free escape, may produce fatal poisoning. So also leucin, tyrosin, and all the excrementitious products which arise from insufficient liver activity, are capable of producing forms of intoxication, such, for example, as eclampsia, etc. By no means all of the alkaloids produced within the body are poisonous. Some of them are met with in the normal tissues, and they are, perhaps, only one of the many results of the dissimilation of animal cells. Nor are all these poisons of bacterial origin, although many are only formed in the presence of microbes. Throughout his life, man is inhabited for nearly the whole length of his digestive tube by inferior and parasitic vegetable organisms. When some of their products are absorbed, more or less poisoning is sure to ensue; while, again, abnormal conditions not primarily due to them may, nevertheless, prevent their elimination, and intoxication thus ensue.

From these constantly menacing sources of intoxication man escapes by virtue of his intestinal, cutaneous, pulmonary and renal emunctories. For instance, the usefulness of the perspiration is shown by the odor which it assumes under the

influence of certain disorders. Amongst hypochondriacs and the inactive, fatty acids are eliminated abundantly by the skin. Hence the odors of hospital wards, asylums, prisons, etc. So, too, in the case of many who suffer from deep-seated indolent ulcers, the odor of the skin is suggestive of the presence of pus. During 24 hours there are eliminated from the lungs 1100 grams of carbonic dioxide, water, etc., which sometimes contain ammonia and various volatile fatty acids; all of which will explain foetor of breath when it is the result of incomplete nutrition and destruction of food. Of all the organs of elimination, the most important is the kidney, which can never be charged with reabsorbing a part of its own products, as does the intestine. The kidneys eliminate fluids and solids; not gases. The most important of the toxic principles contained in the urine are:—

1. Urea, which ordinarily plays a most important and useful role in the economy, since it possesses the property of forcing the renal barrier and removing along with itself both the water in which it is dissolved and other toxic matters along with it. Urea is toxic, but only in the sense that any other substance, even water, may be so,—i. e., it is toxic only in relatively enormous doses, much less so than sugar, and no more so than the most inoffensive salts. This is contrary to generally received views, but is experimentally clearly established by the researches of Bouchard.

2. A narcotic substance, and

3. A sialogogue substance, whose composition is unknown.

- 4 and 5. Two substances having the property of causing convulsions, one having the power of contracting the pupils. Composition of both unknown.

6. A substance which produces heat, by diminishing heat production—possibly a coloring matter.

7. Potassium salts, which are really convulsing agencies and are the most toxic perhaps of any of the poisons contained in the urine. The chloride of potassium, for instance, is toxic at 18 grams for every kilo of animal.

Salivation and myosis, as well as diarrhœa, are often noticed in the so-called uræmia. In that form known as hepatic uræmia, when the liver no longer forms urea, the kidneys scarcely act. In other words, if urea be no longer present in the body, the kidneys are deprived of their principal stimulation to physiological activity. Consequently, urea, for so long a time the bugbear of physicians, is shown to be most danger-

ous when absent. When urea is deficient, it is most wise to resort to withdrawal of large quantities of blood serum or of water in which the other toxic substances are dissolved. This is best done by vene-section, whose value in so-called uræmia past experience amply corroborates. When kidney activity ceases, intoxication is most likely to be produced by potassium salts.

Correct performance of hepatic function is also most necessary, in order that surgical cases may progress without disturbance. Bile escapes direct absorption by the blood, but not all contact with it, since in the intestine it is in contact with mesenteric capillaries, only it must pass again through the liver, which shall take it up anew and pour it once more into the intestine. Bile in the blood is always dangerous, although its toxicity is relatively much smaller than has been generally supposed. Of all the bile thrown out into the duodenum, we are only able to account for about one-half. Its coloring matter and the biliary salts are metamorphosed. Yet, in certain morbid conditions, bile, as such, may be reabsorbed in the liver along the margin of the hepatic cells. In these cases, if the kidneys remain permeable, auto-intoxication is the result.

Putrefaction of intestinal contents affords another source of auto-intoxication. This comes both from imperfect metamorphosis of food, and from bacterial infection. Here the conditions are most favorable. Nitrogenous substances become peptonized, and peptones form the best culture media for microbes. Water is present in sufficient quantities, and a constant temperature of 37°C. is maintained. The digestive tube is always open, and invaded at frequent intervals. By such mechanism are formed those products whose effects are revealed in the so-called putrid fever of Gaspard. Brieger has shown that alkaloïds are developed during the act of peptonization. Fæcal matter contains also excretin, whose toxicity has been amply proven, and several other alkaloidal substances, soluble in various media, varying in toxicity. The potassium and ammonium salts contribute largely to the toxicity of fæces; bile also, but in lesser degree. It has been shown that the aqueous extract of putrid matter is very toxic, but that of fæcal matter is much more so. From the tissues, the secreting organs, the ingesta and the various putrefactions going on within the body, come the principal toxic products introduced into the blood, and which it is possible to estimate. The elimination of this is thrown almost entirely upon the kidneys; but it does not follow because the urine is strongly toxic, that the blood is not habitually so. Auto-intoxication practically does

not happen to those whose kidneys work perfectly naturally.

A normal kidney secretes ordinarily from 1200 to 1500 c. c. of urine; but it may secrete as much as 25 litres. Instead of 20 to 25 grams, the average elimination of urea, it may eliminate 120 grams, as in cases of diabetes insipidus. Instead of the one-half gram of uric acid which is ordinarily eliminated in 25 hours, it may in cirrhosis and leucæmia eliminate 8 grams, or even more. Even 140 grams of sugar per litre may be passed off in this way; and so fat, peptones, albumen and other substances, which it ought not to permit to pass, may escape through its channels. The few grams of albumen which the patient with Bright's disease eliminates each day are made too much of. Such a slight spoliation is not capable of causing deterioration by itself, for a nursing woman loses ten times as much by her milk, and her system is not thereby weakened. It is only when albuminuria is accompanied by fever or by impaired nutrition, or when it is intense, in other words, it is only when albuminoid loss is serious, as in cases of abundant leucorrhœa, dysentery, suppuration and ascites,—that it becomes really serious.

The most serious features of the various conditions grouped in time past under the heading Bright's disease are their so called uræmic features. These happen at the period when retention of toxic products is peculiarly harmful. So long as the urine be ample in amount and of high enough density,—i. e., containing enough toxic materials in solution,—there is no danger of intoxication. But when it no longer eliminates in 24 hours what it ought to, then we see the chronic and paroxysmal nervous accidents, the œdemas, fluctuations of temperature, etc., which are properly considered so serious. Oliguria with urine of increasing density and general œdema of the tissues may be noticed, although the other secretions continue natural and the tongue be moist. So long as the normal amount of solids is eliminated, this form of uræmia may be due to mere accumulation of water, and may not be serious. Ordinarily uræmia patients are those whose urine has lost its toxicity. Usually on the day in which so-called uræmic accidents happen, the urine quite ceases to be toxic and is scarcely more so than distilled water. Urea alone is not to be held guilty for this condition. In order to kill a man with urea, it would require the quantity which he makes in 16 days. Nevertheless, it may become harmful after undergoing transformation into ammonium carbonate or other substances.

Among the most poisonous substances in the urine are the

extractive and the coloring materials. Formal urine loses one-half of its toxicity by decoloration; bile acts in the same way. Urea alone represents about one-eighth of the total toxicity of urine. Ammonia is toxic, but present in small amounts. The coloring matters of the urine cause two-thirds of its toxicity; the remainder of which is to be ascribed to its mineral salts, which it contains in the following proportions: A litre of urine ordinarily contains 44 grams of solid matter, of which 32 are organic, 12 mineral. Of the latter, potassium salts constitutes 3 grams; sodium salts, 7.50; and other earthy salts constitute the remainder.

In these conditions physicians have in time past, relied largely upon purgatives, hoping thereby to remove urea from the blood. Purgatives, however, help first, by dehydrating the tissues.—i. e., removing water with toxic material in solution. But they should be followed by restoring to the tissues pure water. By bleeding, more extractives are removed than by any other channel, except by the kidneys. A bleeding of 32 grams removes from the body as much as would 280 grams of a liquid diarrhoea, or 100 litres of perspiration. This much may be removed by two leeches. It is especially in the sub-acute nephritis of scarlitina, etc., that bleeding finds its greatest indication. If the kidneys be chronically diseased, the utility of bleeding is doubtful, for we cannot continue it incessantly. Between the arterial capillaries of the bowels, however, and the liver is found a mass of blood, accumulated in the portal vessels. This may now be regarded as a reserve, which can be thrown into the general circulation when needed, in order that thereby we may augment arterial tension and so increase kidney function. Cold injections into the bowels will often accomplish this, and serious anuria often disappears after their use. It is reasonable now, also, to make deliberate use of urea by subcutaneous administration as the most powerful diuretic known,—surface friction, caffeine, digitalis, etc., being far behind it in efficiency. In that particular form of intoxication noted in the eclampsia of puerperal patients, inhalations of chloroform are most valuable. Potassium salts should, under these circumstances, never be employed. We may also take advantage of the fact that an exposure of urine in compressed air will diminish its toxicity, on account of contact with the oxygen, as well as the fact that the most toxic bacteria are those which grow without oxygen. Consequently, by causing these patients to inhale this gas, we may in large measure overcome this kind of auto-intoxication.

The value of a thoroughly active liver is also not appreciated to the full extent by most surgeons. The blood of the portal veins is so much more toxic than that of the hepatic vein, that it is most evident that the function of the liver is, in large measure, to purify and remove from the blood that comes from the intestines no small amount of highly toxic material. This has been called by Flint and others, the depurative action of the liver. In order that it may functionate properly, it is well to limit the food to the minimum of putrescible substances; for which purpose a milk diet, when well tolerated, comes the nearest to the ideal. The intestinal canal should also be cleared of putrefactive material so far as possible; and, in addition to purgatives, drugs like powdered charcoal, bismuth salicylate, iodoform, naphthalin, salol, etc., should be administered. Many uræmic accidents supervening after surgical operations may be atoned for and the condition made to pass away by internal administration of naphthalin and charcoal.

Man forms by his liver in 8 hours enough poison to kill himself. Of these liver poisons, the urine does not eliminate half. In fact; it would take the urine all of two days and four hours to get rid of the quantity of poison of hepatic origin necessary to kill. Bile is nine times as poisonous per volume as is urine. Its principal toxicity comes from its coloring material,—of which the bilirubin is the most powerful,—and its salts, all of which, when precipitated, escape reabsorption.

That facts above stated or others related thereto have not been entirely lost sight of by surgeons in time past is shown by such expressions as *septic enteritis*, *enterosepsis*, etc., which are used by various writers. In previous writings I have made a separate and distinct topic of so-called *intestinal toxæmia*, which here I have preferred to introduce as simply one of the many auto-intoxications. To be sure, it is a condition not always permitting of exact definition, nor, still less, can the exact toxic agency be certainly indicated in a given case. Nevertheless it has been made plainer and plainer within the past few years that there is perhaps no condition which so predisposes to sapræmia, septicæmia, or even pyæmia, as this vague condition of intestinal toxæmia, which, nevertheless, is so often present. I have long maintained that many surgical patients present forms of blood-poisoning in which the poison has not proceeded from the wound, and for which the surgeon is not responsible, except in so far as he may have neglected to avail himself of certain precautions based on facts which this chapter purports to teach.

The practice of preparing patients for operation by a course of purgatives, emetics, etc., which has prevailed at many times in the past, is based upon the crude recognition of certain principles which it is desired here to make much clearer. Some one if not each of the general symptoms included under the name *enterosepsis*, *stercoræmia*, *copræmia*, or whatever one may choose to call it, is certainly due to the activity of the colon bacillus, which seems to be made more virulent by certain conditions of diet or retained fæcal excretions, and to such an extent that it now wanders widely from its normal habitat, and may be found in distant parts of the body. Enterosepsis may be mistaken for surgical fever, and is to be distinguished from it, perhaps, only by the careful study of the excretions of a given case; and establishing the fact that they are free, and that, consequently, pyrexia, etc. cannot be due to diminished elimination. Aside from the migrations of the colon bacillus, it is also possible for such a degree of auto-intoxication to occur that infection by other organisms is permitted as it would not otherwise be; and, thus, that which is to-day stercoræmia may become in a day or two a genuine septicæmia, vital resistance being lowered to the extent permitting infection that could, otherwise, not have occurred. The various conditions are clinically often so merged together that it is difficult or impossible to separate and identify them. Nevertheless, the fact should be taught as plainly as our language may permit it, that enterosepsis differs from sapræmia, to be considered shortly, in that in the one instance the putrefying material is contained within a normal cavity, whereas in sapræmia it is contained within an abnormal cavity, in either case corresponding to the septic suppository, varying, however, in the place of insertion; varying also in the nature of the surrounding tissues, which in the latter case are much more capable of absorption and of becoming infected than in the former.

The practical outcome of such a chapter as this is, then, to insist as strongly as possible on the preparation of patients, whenever this is feasible, for an ordeal which comprises the combined effect of anæsthesia and consequent disturbance of secretion and elimination, with loss of blood and of strength and substituted confinement in bed, with moreover, all that it entails in further impairment of activities of important organs. It is not always possible, practically never so in emergency cases, to adopt these precautions; in which cases they must be atoned for, so far as possible, by extra attention in the same directions after the emergency is passed or has been met. In

the former case, however, the functions of the skin, the kidney and the abdominal viscera must be regulated; the first, by hot air baths; the second, by this same measure in conjunction with copious draughts of pure water, the correction of hyperacidity of the urine, and the administration of whatever drug may be of benefit, as diuretics, etc.; and the third, by a course, perhaps covering several days, of gentle or active purgation, by which the alimentary canal shall be entirely emptied of all that may serve to act as a source of poisoning. In addition to this, in certain cases careful massage will dislodge from the muscles and other tissues material which they ought not to retain, and which shall be washed away, as it were, by the extra amount of fluid which this preparation necessitates. In addition also the activity of the heart should be stimulated, perhaps by digitalis, but preferably by that best of all tonics strychnia, which is to be administered hypodermically in average doses of a 30th or 25th of a grain, morning and night. When these precautions are taken, patients will successfully pass through most trying ordeals without anything which may give rise to alarm. When they are not possible, the risk of operating, even in a small way is materially enhanced. So, too, after operations when these precautions have not been taken, it is necessary to give most careful pains to atoning for their lack by such active purgation as a now reduced patient may bear,—by hot air baths if feasible, and by the administration of such intestinal antiseptics as charcoal, naphthalin, corrosive sublimate, bismuth, salicylate, salol, etc., for the purpose of reducing to the lowest possible minimum the opportunity for formation of poisons which shall disturb the proper repair of injury.

Very recently a large amount of most important work has been done, showing that of the various aromatic substances, including indol, phenol, cresol, catcechol, etc., which are produced in consequence of the action anærobic organism upon proteids and their resulting putrefactive decomposition, these substances are eliminated from the body, if absorbed, through the urine almost exclusively in combination with sulphuric acid or acid sulphates in the form of ethereal sulphates. The deleterious character of potassium salts has already been alluded to, and their combination with these ethereal or aromatic sulphates is still more poisonous. Sulphates as they appear in the urine, are spoken of as the pre-formed—i. e., the mineral—and the ethereal sulphates. It has further been demonstrated that indican as it appears in the urine is a combination of the conjugate sulphate of a hydroxylated indol with an alkali,

which may be termed indoxyl sulphate. Indol is a normal and constant constituent of the fæces, to which, in some part, the disagreeable odor of the latter is due. The relation between the indol in the intestines and indican in the urine is now completely established, as well as that indol is the constant product of putrefaction of albuminous material in alkaline media. Indican elimination, then, may be regarded as an index of the degree of antiseptic—i.e., germicidal—activity of the digestive juices. Of these juices, the gastric juice is, by virtue of the free hydrochloric acid which it contains, the ideal intestinal antiseptic; whence it follows that the presence of indican in the urine means absence or deficiency of hydrochloric acid in the stomach. Simon has summarized the importance of this in the most thorough way, and his conclusions may be epitomized as follows:

Intestinal putrefaction is in inverse ratio to the amount of free hydrochloric acid, and is inseparable from increased formation of indol. The conjugate sulphates found in the urine form an index of the degree of absence of free hydrochloric acid.—i. e., of intestinal putrefaction. Indicanuria practically never occurs with normal acidity of gastric juice, save in the case of ulcer of the stomach, which is an apparent exception to this rule. Estimation of indican is a matter of consequent great importance, particularly in differential diagnosis,—e. g., between ileus and coprostasis, where a small amount of indican will exclude the former condition. Two possible surgical conditions are to be considered in their relation to indicanuria: If resorption of decomposing pus is taking place anywhere in the body, there will be increased elimination of indican. If there exist stenosis of the small intestine, the same will obtain. In order to get reliable and average results, it is necessary that the diet should be a normal mixed diet.*

A convenient and reliable method of estimating the probabilities of enterosepsis, etc., is afforded by practical application of the test for indicanuria. From the facts above set forth one may learn also the advantage of administration of hydrochloric acid, probably in combination with minute doses of corrosive

*Indicanuria should be estimated from a 24-hour sample, of which a few c. c. are mixed with an equal amount of concentrated hydrochloric acid, two or three drops of a saturated solution of sodium hypochlorite or of common saltpetre being added, and, after mixture one or two c. c. of chloroform. This mixture is then shaken and set aside. Indigo, if present, is set free and taken up by the chloroform, which is colored blue to a greater or less extent. Before making this test, albumen if present, should be removed, and bile pigments should be separated by carefully adding a solution of plumbic subacetate.

sublimate, as one of the preparations or methods of fortification of a patient for a surgical ordeal. (See Articles by Herter and Smith, N. Y. Med. Jour., June 22, 1895, *et seq.* and by Simon, Am. Jour. Med Sci., July and Aug., 1895.)

SPORADIC CRETINISM OR INFANTILE MYXŒDEMA.

BY JAMES B. HERRICK, A. B., M. D., CHICAGO.*

I have chosen as the topic for my paper, Sporadic Cretinism or Infantile Myxœdema, both because of the intrinsic interest of the subject, and because the recent observation of a case and the perusal of the histories of similar cases occurring in this country and in other lands, have convinced me that unless carefully sought for, mild and even severe cases can be overlooked, and passed by the physician as hopeless victims of idiocy or feeble-mindedness. I believe that more cases are unrecognized than is generally supposed.

The rarity of the reported cases in this country is shown by the fact that in 1893 Osler could find authentic records of but eleven in the United States and Canada. Since then several others have been reported, bringing the total up to about double that number. There are undoubtedly others that have been observed but are not recorded.

Myxœdema is a term used to describe the diseased condition produced by the absence from the body of the secretion of the thyroid gland. It is athyroidea. The thyroid may fail to perform its function because of operative removal—operative myxœdema—or because of atrophy or local disease, primary or secondary, destroying its secreting structure. If such a change occurs in adult life the term idiopathic myxœdema is commonly employed. Occurring in childhood or infancy it produces infantile myxœdema or cretinism. The term infantile or juvenile myxœdema is better than congenital myxœdema, for while there is a rare, usually fatal, and in the strict sense, congenital form, and also a foetal form with slow post-natal development of cretinoid symptoms, the common form is that developing in early childhood.

Operative myxœdema, idiopathic myxœdema and cretinism are identical as regards the prime etiological factor—thyroid inactivity; they differ merely in the manner in which the thyroid becomes inactive and in the age of the patient *i. e.*, whether before or after physical development has been perfected.

*Read before the meeting of the Rush Medical College Alumni Association, May 26, 1896.

The proof of this statement is recorded in one of the most interesting, instructive and brilliant chapters in the history of medicine. Briefly the history is this. In 1873 Gull described a cretinoid state in adult women, in whom was found the same impairment of mental faculties as in juvenile cretins, with the same sluggish performance of function of all the organs of the body and the same peculiar oedematous condition of the skin and subcutaneous tissue. Ord in 1877 reported two similar cases. Autopsy had shown him an atrophic thyroid and a mucinous connective tissue. Clinical observations by Charcot and his pupils, and by Hadden, were followed by the important declaration from the surgeons Reverdin and Kocher that the phenomena seen in many of their patients from whom they had removed thyroids were identical with those of Ord's myxœdema. The physiologists, Schiff in Switzerland and Horsley in England, showed that the removal of the thyroid from the dog or monkey was followed by death, often with cretinoid symptoms. By the implantation of a thyroid gland into the abdomen, however, life was prolonged, thus proving that the thyroid had a function necessary to health, if not to life. In 1888 a committee of the London Clinical Society after a four years investigation, reported that cretinism, operative myxœdema and idiopathic myxœdema were but different types of one and the same disease and dependent upon an anatomical or physiological (functional) absence of the thyroid gland. The added proof was the therapeutic one of removing the evidences of myxœdema by implanting thyroid gland, by feeding fresh glands of lower animals, and by the administration of extract of the gland, the powdered glands, and lately the essential principle of the gland, thyroïodin. The names of Kocher, Horsley, Bircher, Lannelongue, Vessale, Horwitz, Mackenzie, Fox, Baumann, Murray, Ewald and others are connected with this therapeutic experimentation.

A cretin is, therefore, a child afflicted with athyroïdea before the period of complete physical development; cretinism is infantile myxœdema; the term cretinism should apply only to that one particular class of idiocy in which there is some disease of, or change in, the thyroid gland. This leaves out "all cases of idiocy due to direct injury or disease of the central nervous system." This limitation of the term cretinism is that which is strongly urged by Horsley from whom I have quoted.*

*Take's Dictionary of Psychological Medicine. Vol. I, p. 284.

Etiology. The older theories, *e. g.*, the nervous theories, as to the causation have been discarded. The theories prevalent to-day are well stated by Schæfer (*Brit. Med. Jour.*, Aug. 10, 1895). According to the *internal secretion theory* the thyroid is a secreting gland; its secretion is taken up by the lymph-vessels and is necessary for the proper metabolism of the body, especially as regards nervous and connective tissues. Absence of this internal secretion means improper metabolism—myxœdema. The *auto-intoxication theory* assumes that the thyroid has for its function the destruction of toxins that are naturally produced in the healthy body and which, without the thyroïdal antidotal action, lead to the condition we term myxœdema. To quote Ewald: "The secretion of the gland acts as an antitoxin against certain toxins that appear as the by-products of tissue change." (*Centralblatt für Innere Med.* No. 17, 1896. Report of the Proceedings of the Fourteenth Congress for Internal Medicine).

Baumann has recently obtained from the thyroid glands of sheep an organic iodine compound—thyroidin—which he believes is the essential principle of the thyroid gland. Therapeutic experiments with this substance seem to support Baumann's statement, (Ewald, Roos, Treupel). Myxœdema would then be etiologically due to the absence of thyroidin from the body.

The causes that operate to deprive a fœtus, an infant, or a child, of the thyroid gland, or to induce an existing thyroid to atrophy or to become in any way functionless, are not known. Hereditary influence is not without some force. In goitrous districts as in Switzerland, cretinism is so common as to be truly endemic. This endemic form is usually associated with an enlarged but inactive thyroid. Endemic cretinism is distinct from the sporadic cases and is therefore only incidentally referred to in this paper.

Symptomatology and Diagnosis. Except in the rare cases of foetal myxœdema, nothing wrong with the child is remarked until the age arrives at which the child should begin to walk, talk and exhibit the ordinary progressive signs of mental development. It then gradually dawns upon the parents that the child is not as bright as other; it is not talking as early as it should; is slow in its movements; inclined to be logy and listless. The teeth may be late in appearing and are poorly developed when they come. The growth in height does not keep pace with the growth in breadth so that the child is stunted, with broad head, wide space between the eyes, short chubby arms, hands and legs, prominent abdomen often with an

unclosed umbilical opening. The gait is unsteady; there is marked lordosis. The skin is hard, harsh, dry, apparently œdematous but does not pit on pressure. The supra-clavicular spaces are full with masses of fat so that the neck seems short and chunky. The face is placid even to stupidity, this appearance being aggravated by the thick lips, and swollen, meaninglessly protruded tongue. The hair is thin, coarse and dry. All the organs appear to perform their functions poorly. The appetite is poor the bowels usually constipated, the urine scanty, strong and highcolored; the temperature is subnormal, the pulse slow, the muscles weak. The nervous system, as Horsley says, because the most fully developed and the most sensitive, shows the intoxicating effects the more markedly, as evidenced by the great mental weakness that has lead these unfortunates to be classed as idiots. Unchecked, these cases go on even to adult life dwarfed and stunted mentally and bodily. They may talk and perform the ordinary routine of life. but the woman of thirty is in stature of body as of mind, but an ill-formed child of ten.

Report of Case—The history of one case of cretinism is strikingly like that of another. My own case presents very few points of difference from cases reported by others.

Anamnesis—*Jan. 7, 1896*:—E—M—female child of notrelated parents, was born in April, 1891, after an uneventful pregnancy and by an easy first labor. She was apparently healthy and weighed seven pounds at birth. She cut her lower central incisors at seven months. The other teeth were slow in appearing and seemed poorly developed. Aside from an attack of bronchitis at six months she had been free from any illness. She was measured when three months old and was found to be twenty-seven inches in height. Two years later she had gained three inches, and since then (two and one half years) had not gained. She did not stand alone until two years of age. She learned to speak her first word, "mama" at three years. The mother could count only sixteen words in the child's vocabulary. She had worn for months at a time a pad to cure the umbilical hernia. She had a poor appetite, was terribly constipated, the fæces being "like stones" and often covered with blood streaks. The urine was strong and none was passed during the night. She seemed to suffer no pain, slept well, was contented and happy during the day, seemed to understand when spoken to, but was slow and sluggish in movement and in comprehension. She was as contented to sit in one place on the floor for two hours and play with a rag as

with a doll or another child. The skin was always cold. She walked in a peculiar, almost waddling manner, with the abdomen stuck prominently forward and was unsteady on her legs. She toppled over if the mother's dress brushed against her.

This history I obtained when the patient was brought to me January 7, 1896. She had been under the care of several physicians. I myself had several times, when the child was about a year and a half old, adjusted the umbilical pad but had failed to notice the cretinoid condition. When, however, after an interval of three years she again returned to me, it was plain that the child was a cretin.

Status Præsens:—She was pale and sallow. The face was broad, with a stupid look. The tongue half protruded, the lips were thick. The neck was short, thick, and the fatty supra-clavicular masses were present. The skin was dry, harsh, scurfy; the hair dry, coarse and thin. The scalp was covered with a thick, dandruffy crust. The teeth were miserably developed, crumbly and as though worm-eaten. As she stood stripped, there was seen the marked lordosis, and the prominent abdomen showed the bulging navel. The arms and legs looked plump, the folds and wrinkles being deep. The calves of the legs and the prominent abdomen made one think of pseudo-hypertrophic paralysis. And this was so strongly suggested by her gait, and by her supporting herself on her hands and pushing herself up, owing to muscular weakness, that she had been under a physician's care for some months for this ailment. She did not, however, climb up her own legs as do these patients.

The lungs, heart and abdominal organs gave negative results on examination. The temperature was 98° per rectum, the pulse 80° after the examination. She was decidedly dull and sluggish intellectually, and spoke only a few words in a hoarse and coarse voice. The thyroid gland could not be seen or felt.

I give only a few of the measurements taken but these are illustrative:

Height in stockings	30 inches.
Distance between eyes (inner canthi)	3½ centimeters.
Circumference of head	51 "
Circumference of neck	24 "
Circumference of thigh	23 "
Circumference of abdomen	51 "
Circumference of chest	48 "

The mother expressed better than do these figures the large size of the head, when she said the child took the pat-

tern for dresses of a child of one year but the hat of a child of seven.

To abbreviate the further history, suffice it to say that on thyroid gland, given in the form of P. D. & Co's thyreoidin one-half tablet two to four times daily, she at once began to improve. There was at first the evidence of thyroid reaction in an increase of temperature, rapid heart's action, profuse sweating, itching skin, restlessness, diarrhœa. There was a loss of nearly two pounds in weight but there has been a gain of an inch in height. The neck has lost its chunky look, the folds of the skin are less deep, the skin is warm and moist, the hair is softer and finer, the abdomen while still prominent, is shrunken so that the mother has taken in the bands of the skirts as they have grown too loose. But best of all, she is bright. She has added to her vocabulary many new words; she is no longer contented to play with a bit of paper or a rag but wants a doll and usually that of her brother, and she howls like any child if she cant have it. And she has learned to strike back. She has grown mischievous; has to be watched constantly or she runs out of sight. She is steady on her feet; walks alone on the street.

It is transformation of an idiot into a bright wide-awake child, the change of a stunted, pigmy-like unfortunate—"a toad-like caricature of humanity" Osler calls it—into a growing, developing human being. Thyroid therapy is one of the greatest advances made for decades. With quinine, potassium iodide, and diphtheria antitoxin, the thyroid gland makes our fourth curative agent that can by right be termed a specific.

I must not omit to refer to the fact that certain of these cases pass for other affections. Without going into the points in differential diagnosis I will merely name as conditions for which cretinism might be mistaken, idiocy, with its varying grades of severity; nephritis, rickets, pseudo-hypertrophic paralysis. The caution must be repeated not to regard as cretinism cases of idiocy due to primary nervous diseases, but only those in which there is mental insufficiency due to athyroidea with the accompanying characteristic features as regards facial expression, shape of skull; œdema, condition of skin etc.

I was limited by our worthy secretary to ten or twelve minutes for the presentation of this paper. I have, therefore, merely aimed to give the most salient points concernig this extremely interesting subject, and have in no sense attempted its complete exposition. If, however, these few words shall stimulate any hearer to look over his flock of little patients, and to

discover one of these ill-favored children, and to rescue him from what is, to the parents at least, worse than death, this paper will not have been written in vain*

*Since reading the above paper, four physicians who heard it have told me of cases they had seen. One had been recognized as such the other three had not been diagnosed as myxœdema. The writer would be pleased to receive notes as to cases of cretinism, particularly if they can be accompanied by photographs.

COMMENCEMENT WEEK AT RUSH.

Another year has rolled by and *Rush* has closed one of the most satisfactorily brilliant commencements in all the fifty-three of her experience. Every detail of the whole week's exercises fitted in charmingly and all united in praise of the institution and its great class of '96. The Alumni were back in great numbers and expressed their hearty approval and high appreciation of the great improvements in the work of the college.

Dr. N. H. Hillis preached a most excellent sermon to the graduating class and a large audience, Sunday afternoon, May 24.

On Monday, May 25, at 10 a. m., Prof. Henry Lyman gave a very interesting and instructive clinic in General Medicine in the Upper Amphitheatre of the college.

At 2 p. m. Prof. Hamilton gave a fine Surgical Clinic that was witnessed by a large and appreciative audience.

The class Day Exercises of the class of '96 were held at 4. p. m. The productions were of a high order. Special mention is due the poem of Dr. T. F. Conroy, A. M.

In the evening the class of 1886 enjoyed a reunion and reception at the home of Dr. A. J. Ochsner.

The Annual Scientific Meeting of the Alumni was held at 10 a. m. Tuesday, May 26. The papers read at this meeting will be printed in the Summer numbers of the *Corpuscle*.

After the adjournment from 12 to 2 p. m., a reception was given to the Alumni and members of the graduating class in the Laboratory Building.

The various laboratories were open and an opportunity given the old practitioners to see how modern laboratory work is conducted.

In the physiological laboratory the Eckard Catering Company served a delicious luncheon which was enjoyed by a large number.

Prof. Senn occupied the afternoon with one of his clinics which have become world-renowned.

The Alumni and their friends formed a large theatre party at Hooley's Tuesday evening.

Wednesday morning, May 27, at 9 a. m. a large number gathered to witness Dr. Ethridge's gynecological clinic, which was followed by the annual business meeting of the Alumni Association.

At 2 p. m. the graduating exercises were held in Central Music Hall the program of which may be seen elsewhere.

The reception and joint banquet of the Faculty and the Alumni which was held in the evening, was a brilliant success, about five hundred being present. Dr. B. C. Gudden, '79 presided and gave an address, other addresses were given by Dr. J. E. Cox, '96, President Wm. R. Harper, Dr. A. C. Cotton, '78 and Prof. J. B. Hamilton while the R. M. C. Quartette and the Mandolin Club enlivened the exercises with their highly appreciated music.

After the banquet was over all departed for their homes with happy feelings of satisfaction in the ability of *Rush* not only to give a finished medical education but also to entertain royally.

ORDER OF GRADUATING EXERCISES.

1. Processional.....Triumphal March—*Buck*
MR. R. L. HARRIS, '97
2. Prayer
REV. FRED'K J. WALTON
3. Music.....Selection
RUSH MEDICAL COLLEGE MANDOLIN CLUB
4. Presentation of the Candidates for the Degree in Medicine
to the Trustees and Faculty by the Secretary of the
College
5. College Hymn,
The Graduating Class with Organ Accompaniment
6. Conferring of Degrees,
PROFESSR JOHN J. HALSEY, ACTING PRESIDENT OF THE
UNIVERSITY.
7. Music,.....Selection
RUSH MEDICAL COLLEGE MANDOLIN CLUB
8. Valedictory Address,
SUMNER ARTHUR EDMANDS, M. D.
9. Music,.....Flirtation Polka
RUSH MEDICAL COLLEGE MANDOLIN CLUB
10. Presentation of prizes,

11. Song—GAUDEAMUS,
The Graduating Class with Organ Accompaniment
12. The Doctorate Address,
PROFESSOR H. M. LYMAN
13. Music.....Minstrel Parade March
RUSH MEDICAL COLLEGE MANDOLIN CLUB
14. Benediction,
15. Music.

ORGAN.

HONORARY DEGREE IN MEDICINE.

Dr. Nathan M. Dodson, of Berlin, Wisconsin,

HONORS AND PRIZES.

The fellowship in chemistry—James Edwards Skinner, A. B., M. D.

The fellowship in morbid anatomy and bacteriology—John Hammel Nichols, Jr., M. D.

The Benjamin Rush medal—Spencer DeWitt Beebe, Ph. G., M. D.

The J. W. Freer medal—Fred Ashford Guthrie, M. D.

The J. W. Freer second prize—Merlin Chauncey Johnston, M. D.

The L. C. P. Freer medal—Ellsworth D. Whiting, A. B., of the class of 1897.

The L. C. P. Freer second prize—Edmund F. Burton, LL. B., of the class of 1897.

The Daniel Brainard medal—Willis Grant Hatch, of the class of 1897.

Honorable mention—Louis Lowenthal, of the class of 1898, and C. E. Judd, of the class of 1897.

The DeLaskie Miller prize—Wm. Launcelot Brown.

THE DOCTORATE ADDRESS.

Dr. Henry Lyman gave the Doctorate Address at the graduating exercises in Central Music Hall, May 27th, 1896. We regret being unable to give the address in full.

He extended congratulations to the class on becoming members of a profession—not only that but members of a *learned* profession, and then said in part:

“What is a profession? “It is a body of men who propose to be associated for the purpose of regulating their conduct in accordance with certain principles that are deemed essential.

"Thence the difference between *professional conduct* which is supposed to be regulated in accord with truth and righteousness, and *commercialism* which has for its only object individual gain."

"Having entered a profession you have incurred certain obligations." "We have guaranteed your fitness as candidates." You now are under obligations—

"To *yourselves*, to increase your professional knowledge, and also your general information so as to become all around men;

"To *other members of the profession*, taking as your professional rule the community of scientific, intellectual and moral interests of all your bretheren. "Guard the honor of the body as your most sacred possession. "Do unto others as you would be done by;

"To *your patients*—treat them with all the skill and attention in your power making them feel that you are their friend and not a selfish commercialist taking advantage of their misfortune;

"To *the community*—seeking to impart knowledge of the art of right living, being leaders in the great work of improving the conditions of existence in our new towns and cities, in the matter of sanitation and hygiene."

"Thus will you become honorable professional men."

VALEDICTORY.

BY SUMNER ARTHUR EDMANDS, M. D.

"Who ate Roger Williams?" The interrogative of this sentence is indeed ridiculous, but the scientific solution of the same is profundity itself.

This stern old hero of religious liberty fell asleep among his rescuers, the native Narragansetts, and his grave for a time was the site of neglect. But a friendly apple tree, exemplifying Nature's reluctance to let a great soul perish in oblivion, sent down her roots to the head of the grave and spread her boughs as a canopy of protection over it.

The seasons came and went. A wagon road found its way hard by the burial place. Spring decorated it in pink and white as a blossoming symbol of that pure character now at rest. The air laden with fragrant incense, spake of the imperishable and ineffable love of that heart.

Autumn's exchanged fruitage proclaimed a life whose good

deeds and mature judgement made all life more palatable and sweet for its having lived and died.

The traveler in those remote regions never failed to draw rein by the old apple tree to partake of its annual yield, little dreaming that in after years this strange conundrum with all its cannibalistic turn, would be expounded at his expense. But when the tree was upturned it was found that the roots, following the course of greatest nourishment and least resistance, shaped themselves to the human form, and to-day Boston's Museum holds up to the tourist's gaze this curious and preserved specimen, as an object lesson to that great and universal law of the chemical laboratory—the "indestructibility of matter."

There is a laboratory for all humanity and in which you and I, fellow-classmen, enter at large from this hour. The principles there which successfully govern the affairs of daily routine are many and intricate; but the one great truth is, that the human mind the highest type of creation, is immortal, as truly so as is dead inanimate matter, indestructible.

And if the old apple tree fed by the bones of Roger Williams was any the more beautiful for its source of nourishment, how much more beautiful and bountiful must be the tree of life for the noble generous lives of those, who here lived and died to maintain the right.

If a corpse can direct and shape the course of vegetable life, how much more might a man shape and fashion the destiny of a nation. He needs but to come in contact when straightway it becomes a part of himself, and the closer that contact the mightier the influence and responsibility.

I am sure we all recognize the application of this principle to our profession, for there is no occupation that brings its incumbent so into responsible contact with the nation's life as that of the physician, for *he* enters the *homes* of that nation. It looks to him for its physical welfare: It trusts him in its most sacred privacy. It is for the physician to read the "Scarlet Letter" of crime as it burns its victim into life-saving repentance.

Nature claims the doctor as her hand-servant and the interpreter of her unchanging laws and when we apply those laws to the remedy of human ills with due precaution to incompatibles, let us see to it that our word and deed are not inconsistent with our country's best interests. Where we disguise the bitter herbs for the palate's sake, let us make sure that life itself is the sweeter by reason of our existence. Where

we labor to antagonize disease, let us be wise to overcome ignorance and vice which are the *causes* of disease.

In a word, let us love our profession more than our practice and our country's welfare more than our profession, ever mindful of our adopted motto—"*Humani nihil alienum.*"

I would consider this honor unbecoming to your servant and your expectation only half realized if I were to shake the hand only in a flippant farewell and to forget these few words as the Godspeed of a solemn parting.

There are others to whom a recognition is due and to whom our minds turn at this hour. There is something back of all this procedure besides an unique faculty and an industrious student that has given to the occasion its impetus and its possibility. I speak of the representative homes of our classmen. Happily to-day there are with us—perhaps for the first time—fathers and mothers, sisters and brothers. He whose weary round of daily toil was made brighter by the anticipation of this day; she whose household duties and endless concern were lightened by the hopes of this hour; and they whose words of cheer and comfort have many times rallied our fleeting courage.

As a class we desire to thank you for your toil and privations, for it was that which made it possible for us to meet your sons, in whose loyal and friendly companionship the exchange of thought and experience has been both pleasurable and broadening, and to which end, as fellow physician, we feel to claim fraternal kinship to your homes.

When the legal recognition of our labor is laid before you may you read on its page some small recompense for your long hours of toil and sacrifice; and may a dutiful and grateful son repay your old age with a threefold return of blessing.

Accept from the class of '96 the expression of its gratitude and its reluctant farewell.

As a graduating class we are about to take leave of an institution whose name we have come to honor and whose interest we will protect with unswerving loyalty. It was founded among the first of kindred colleges in this country, and by the foremost of American surgeons of that day—Daniel Brainard. It survived its early struggles like a healthy child the common diseases of childhood. It was tried and tested in the flames of '71, but came out unseared in the eminent persons of Joseph Ross, Moses Gunn, Joseph Freer and the immortal Allen.

Thus founded and proven in worth, it is to-day triumphantly

maintained in the excellency of its present faculty, that body the forbearance of which I hope will pardon me a personal allusion on this public occasion.

We assure you that we appreciate the privilege that has been ours in attending an institution whose worth is universally recognized, Whose foreign reputation is not eclipsed by its home honored name. A college whose standard is ever in the front ranks of advancing science, never content to be the drag heels of the rear van, it has ever improved the old methods while at the same time it has gained for itself a meritorious individuality for original investigation. Its present equipment and site for the study of medicine and surgery is unsurpassed.

All these we as a class have been keenly conscious of and our association with you personally and as a body, gentlemen of the faculty, has been both congenial and instructive.

Accept of the class its thanks for your untiring efforts in the cause of science, and while we regretfully sever our immediate relations with you, yet it is for the spreading of those principles of your instruction to the welfare of humanity at large that we now bid you farewell.

Fellow classmates, the time has now come for us to part, but may the friendship here found be as lasting and pleasant to recall as the recollections of our school days.

In our departure to various fields of labor, may the design that ornaments the walls of grand "Old Rush" be upon the horizon of our life like a fixed star to guide and direct our purposes. May the circle indicate to us life's endless endeavor for success and the immortality of our deeds relative to science and character. May the winged staff entwined by the serpent be in our profession the insignia of blended power and wise discretion, the life of which will surely speed the day when the torch of knowledge will burn with redoubled splendor to the credit of our esteemed faculty and the honor of that institution, our beloved Alm Water, whose walls looking down upon us in the past have declared the "Fiat Lux" of modern science. There may she ever reflect the light of latest science, until over the wrecks of time her wall shall stand like a monument, in the shadow of which you and I will be sleeping, and upon which the great Physician in passing may read our epitaph, among the honored and pardoned, whose lives were "Dedicated to the quest of that knowledge which will relieve suffering and prolong life."

YOUNG MENS' CHRISTIAN ASSOCIATION.

(This article was unfortunately laid aside in the late issues of the CORPUSCLE.)

From the recent annual report sent this month from our Rush department Y. M. C. A. to the international committee of New York City, we take the following figures which may be of interest to many Rush students who are not acquainted with the organization.

Average attendance at the twenty-one devotional meetings, twenty-five; average attendance at the five missionary meetings, sixty; number of active members at present in the association, fifty-two; number of associate members, fifty-two. Friends of the movement rejoice over this year's increase in membership. In February 1895, the record shows but forty-three active and twenty-seven associate members.

On February 6th the annual election of officers of the Rush Y. M. C. A. was held at their place of meeting in the college laboratory. The following men were elected:

Mr. George Bond, '97, President.

Mr. H. G. Reinhardt, '97, Vice-President.

Mr. F. W. Hacking, '99, Treasurer.

These young men are thoroughly consecrated to the cause of the master and we bespeak for the association under their management, not only increased spiritual growth but a larger increase in its membership of young men who are resolved that during their student days they will make their lives count for Christ.

The change of time and place of their weekly meeting seems to have been a change for the better, judging from the increased attendance at the meetings.

Every student in the college is cordially invited to attend the half-hour meetings each Saturday noon in the lower lecture room. Come all, and with us lift up your voices in song, listen to the word of God, and partake of the rich intellectual feasts given to us from time to time by eloquent speakers, procured for us by our devotional committee from Chicago's abundant supply.

Such speakers recently have been Prof. Geo. Wise, of England, Mr. Geo. B. Smith, college secretary of the Illinois associations, Rev. W. R. Newell of the Moody Institute, Rev.

J. H. O. Smith of the West Side Christian church and last but not soon to be forgotten by many of us, W. J. Wanless, M. D. of India.

Watch the bulletin boards on Saturday morning for announcements.

Quite a number of Rush students attended the reception given at the association building, 542 Monroe St., Thursday evening, Feb. 27, 1896, by the west side Christian Church to members of the association. All present enjoyed the musical and literary program that was presented and afterward the refreshments that were served. The largest class representation from Rush was that of the freshman class.

The following words of John A. Mott, last year of Chicago, but now engaged in association work in China, are well worth consideration: "If a Christian man thinks that he has not time to be a member of the association it is one of the strongest reasons possible why he should be a member. A man is in great spiritual peril when he persuades himself to believe that there is not time to do the will of God." M. T. B.

LOCATIONS.

There is a town of 2000, two thirds Scandinavians and well to do. A Scandinavian doctor could acquire a lucrative practice.

FERGESON & GORDON, Forest City, Iowa.

A GOOD LOCATION. For a physician who is willing to invest some money in office fixtures, drugs, and instruments.

The location alone is worth the price asked, to any one who wishes a growing practice in a village of 900 people, with a large and increasing country population. Two other doctors, one a Homeopath from Chicago Hahnemann and the other a Regular from Keokuk College, are located at the place, which is one hundred miles from Chicago. Particulars may be obtained by addressing: Terms easy.

Lock Box 155, WALNUT BUREAU Co., Illinois.

There is an opening for a good physician in the district of Forest Glen, which is situated between Elston Ave. and West 48th Street. Adjoining the suburb are Mayfair, Jefferson Park and Edgebrook. The two former places are built up and the latter has also good future promises. The residents of the district are very desirous of a physician locating here. The doctor in question must be a married man. Arrangements for a nice house at a very low figure can be made. Address:

C. D. NEEROS & Co., 225 Dearborn St. Chicago.

Alumni Department.

JAMES B. HERRICK, A. B., M.D., EDITOR.

MEMBERSHIP IN THE ALUMNI ASSOCIATION OF RUSH MEDICAL COLLEGE is obtainable at any time by graduates of the College, providing they are in good standing in the profession, and shall pay the annual dues, \$1.00. This fee includes a subscription to THE CORPUSCLE for the current year. This journal is the official organ of the Association.

Dues and all communications relating to the Association should be sent to
JOHN EDWIN RHODES, M.D., Sec'y and T eas., 34 Washington St., Chicago

With this number the CORPUSCLE is discontinued to all Alumni subscribers who have not renewed their subscriptions by sending One Dollar to Dr. J. Edwin Rhodes, 34 Washington St., Chicago, to pay dues of Alumni Association and subscription to the CORPUSCLE for one year.

The scientific meeting of the Alumni Association is becoming one of the attractive features of commencement week. This year we were disappointed at the failure of two essayists to put in an appearance. But a large and attentive audience listened to the papers of Prof. Rosewell Park on "Auto-Infection, Especially in Surgical Patients," and of Dr. James B. Herrick '88 on "Sporadic Cretinism or Infantile Myxoedema" and of Dr. H. A. Winter, '73 on "Appendicitis."

The kindness of Prof. Park in coming to Chicago to read his paper was warmly appreciated by the association and his scholarly essay was heard with great pleasure and profit by all.

At the business meeting of the association the following officers were elected for the ensuing year :—

President, Dr. T. C. Clark '81 Stillwater Minn; 1st Vice-President, Dr. A. I. Bouffleur '87 Chicago; 2nd Vice-President, Dr. S. G. West '90 Chicago; Secretary and Treasurer, Dr. John Edwin Rhodes '86 Chicago; Necrologist, Dr. John M. Dodson '82 Chicago; Editor Alumni Department of CORPUSCLE, Dr. James B. Herrick '88 Chicago. Executive Committee, Dr. C. D. Wescott '83 Chicago, Dr. John Edwin Rhodes '86 Chicago, and Dr. F. C. Honnold '96 Chicago.

Resolutions of sympathy with Dr. Holmes in his illness were offered, and the Secretary was instructed to convey the

same to Dr. Holmes, and to send with the same some flowers.

It is a pleasure to report that Presiden Holmes is still improving. To some of our graduates who may not have heard of Dr. Holme's illness it may be said in explanation that a few days ago a femoral thrombosis occurred quite unexpectedly in the left vein, causing not alone much suffering to the doctor but much anxiety to his numerous friends and colleagues. There is every reason now to hope for a perfect recovery.

The following note fully explains itself:—

Chicago, May 30th, 1896.

DR. J. EDWIN RHODES, SEC'RY.

Dear Sir:—Dr. E. L. Holmes wishes to express sincere appreciation of the sympathies of the Alumni Association of Rush Medical College and also of the beautiful floral testimonial accompanying your note. Sincerely,

Paula Holmes Gray.

Dr. R. G. Sayle, '85, Milwaukee, is attending a course at the Post Graduate School.

Dr. A. T. Arbuckle, '86, notifies us of a change of address to 4327 Drexel Boulevard, Chicago.

Dr. Fremont E. Chandler, '93, is located at 1317 Noble av., corner Seminary avenue, Chicago. He is Attending Physician and Surgeon to Bethany Home Hospital, Ravenswood.

Dr. D. O'Shea, '83, writes a cheerful and encouraging letter from Kankakee. He reports great improvement in his health; and all Alumni who know the busy and enthusiastic doctor will join in wishing him a speedy return to his old time vigor of body and mind.

RECEPTION OF CLASS OF '96.

One of the most pleasant features of Commencement week was the reception of the class of '86, given by Dr. and Mrs. A. J. Ochsner at their home, 710 Sedgwick street.

After a round of cordial hand shaking and jolly good fellowship the guests were delightfully entertained by the well known pianist, Prof. Wm. Linberg. The loving cup was not missing and each drank to the health of his fellow classmate. Many old time acquaintances were received and the relating of personal experiences such as only the first ten years of practice can afford made the evening pass most pleasantly. The celebration of the tenth anniversary, long to be remembered by the class, was ended by all participating in singing college songs.

Dr. and Mrs. Ochsner were assisted in receiving by Miss Nash, Mrs. L. H. Prince, Mrs. E. J. Mellish and Mrs. C. S. Bacon.

The members of the class of '86 and invited guests present were:

Drs. Jno Edwin Rhodes, '86; W. E. Gamble, '86; E. J. Mellish, '86; J. Johnston Bell, '86; Wm. H. Hayman, '86; Carl Hatterman, '86; A. T. Arbuckle, '86; L. B. Hayman, '86; L. H. Powell, '86, all of Chicago. P. Daugherty, '86, Junction City, Kan.; J. A. Rutledge, '86, Elgin, Ill.; C. Richter, '86, Ashland Wis.; D. W. Wheeling, '86, Wall Lake, Iowa; C. H. Bruner, '86, Greenfield, Ind.; Frank Fitzgerald '86, Morrison, Ill.; O. E. Haering, '86, Bloomington, Ill.; L. F. Bennett, '86, Beloit, Wis.; A. J. Hodgson, '86, Waukesha, Wis. Also W. F. Robinson, '93; A. M. Corwin, '90; C. S. Bacon, C. M. C. '84; A. I. Bouffleur, '87; Alfred Hinde, '78 and Wm. R. Parks, '93.

LOCATIONS.

There is an exceptionally good opening here for an energetic Physician. German or Scandinavian is preferred, though a hustler of any nationality is how to meet with success and could easily work up a good office practice. We have one physician but he is in the country most of the time and therefore unable to attend to office practice. This is a town of 400 in a township of 1500 one third of whom are Scandinavian, one third Irish, one third German and American. No other physicians are located within less than twelve or fifteen miles.

G. W. LA POINTE, Wilson, Wis.

This place has one doctor but is much in need of another. To an energetic man a success is assured. At present scarlet fever is abroad in the town and an early location of a good man is desirable. A man of some age and experience is preferred.

J. J. WHITE, Carthage, S. D.

The W. T. Keener Company rendered valuable aid to the boys in their late Ball for the benefit of the athletic association but through an oversight of the person presenting copy this fact was overlooked.

The Corpuscle.

EDITORS,

J. E. LUCKEY, '97, Editor-in-Chief.
746 West Adams St., Chicago.

T. R. CROWDER, '97, Sec'y and Treas.

FRED. BARRETT, '97. E. L. McEWEN, '97. A. F. STEVENSON, '98.

Communications relative to advertisements and subscription (Subscription price \$1.00 per annum), should be addressed to the publisher. Remittances should be made by money order draft or registered letter payable to "THE CORPUSCLE," and addressed to Fred C. Honnold, 877 Jackson Boulevard.

RUBY RED AND BLACK: Colors of Lake Forest University. ORANGE: Color of Rush Medical College.

Editors.

This number of the CORPUSCLE is issued under the direction of a newly installed Editor-in-Chief who fully appreciates the great responsibilities of the office. We beg for our mistakes the kind forbearance of our patrons and their hearty co-operation in our labor.

The retiring editor, Mr. E. D. Whiting, has rendered faithful and efficient service during his term of office. He is a man whose education and natural ability peculiarly fit him for a successful and brilliant professional career. His essay on "Malaria" winning the "L. C. P. Freer Medal" this Commencement, is said to be one of the finest ever presented by an undergraduate.

The CORPUSCLE wishes to extend congratulations to Mr. Whiting for this honor and to express gratification that his place on the Editorial Board is to be filled by a man so pre-eminently fitted for its duties as Mr. A. F. Stevenson, '98.

Rush recognized abroad. RUSH has been recognized by the *Royal College of Physicians and Surgeons of London*, an honor enjoyed by but two other medical colleges on this side of the Atlantic. The following communication is self-explanatory:

"Examination Hall, Victoria Embankment, London, W. C., May 15, 1896.—Dear Sir: I have now to inform you that the Royal Colleges of Physicians and Surgeons of London have considered your application of the 30th of January last for the recognition of Rush Medical College by this board and I am happy to inform you that your application has been acceded to, and that in consequence the Rush Medical College will be added to the

list of institutions recognized by this board. I am, dear sir, yours faithfully,

"FREDERIC S. HALLETT, Secretary.

"To E. Fletcher Ingals, Registrar."

RUSH has always been a conservative institution but one ever on the alert for the latest when it proved the best. That her true worth is recognized abroad is a source of very great satisfaction to her Alumni and students.

Dr. Senn honored Prof. Nicholas Senn was elected president of the American Medical Association at their late meeting in Atlanta. We congratulate Dr. Senn on this well deserved honor. In no less degree are congratulations due the Association itself in its happy choice of so illustrious a leader.

A Just Criticism. The medical profession is the grandest of all the professions. It demands the broadest knowledge and the deepest sympathies. No man is nearer an angel than the *ideal* physician. But unfortunately the ideal man in any profession is a scarce article, and yet medicine has its share of the noble and the great. However, medicine is rapidly progressing toward the ideal.

To progress, we must mend our faults; to mend our faults, we must see them: hence, the progressive and fair minded do not object to just criticism. Then permit the suggestion that there is a tendency on the part of some physicians and many students to treat some phases of their work in the wrong spirit. Necessarily the medical man becomes familiar with some hidden and most sacred things. When he finds how very weak human nature is at its best, he is shocked. It takes the strength of a firmly fixed character to rise above this and not settle into an unwholesome disregard for the good and pure in life and conversation. but the rise ought to be made. One can not afford to allow himself to become heedless in this matter for it has a very important bearing upon his own best good.

It is for just this reason we feel that one of the addresses at our late banquet was censurable. One was constrained to exclaim in amazement "Where am I At?"

Errata.

Through some oversight our *May* number appeared under date of *April*. On behalf of those in charge at the time, we wish to apologize to our patrons and seek for this and any unfortunate mistakes of the future their charitable consideration.

Doings of Commencement week. The various addresses, papers, essays, etc., of commencement week will be published in the CORPUSCLE during the summer months.

THE FIRST SIGNS OF LOCOMOTOR ATAXY.

According to Prof. Fournier, the first symptoms of ataxy may be classed as follows :

1. Sign of Westphal.
2. Sign of Romberg.
3. The "Stair" sign.
4. Crossing of the legs.
5. Walking at the word of command.
6. Standing on one leg.

1. Westphal's symptom is well known. It consists in abolition of the pre-rotulian reflex, and is present in two-thirds of the cases.

2. Romberg's sign can thus be appreciated: The eye is an indirect regulator of motion; it helps to correct deviations in walking and maintains the equilibrium. When a patient is suspected of incipient ataxy, it will often suffice to make him close his eyes when in the erect position to verify the diagnosis. In a few instances his body will oscillate, and if the malady is somewhat advanced he will be in danger of falling.

3. The "Stairs" symptom. One of the first and most constant symptoms of incipient locomotor ataxy is the difficulty with which the patient will descend stairs. If questioned closely on the subject he will say that at the very outset of his malady he was always afraid of falling when coming down stairs.

4. The manner in which a patient crosses his legs is often significant. In the normal state a man when performing that act lifts one leg simply to the height necessary to pass it over the other, whereas in the affection under consideration he lifts it much higher than necessary, describing a large segment of a circle.

5. Walking at the word of command. The patient seated is told to get up and walk instantly. After rising he will hesitate, as if he wanted to find his equilibrium before setting off. If, while in motion, he is told to stop short, his body, obeying the impulsion, inclines forward as if about to salute, or, on the contrary, jerks himself backward as if in order to resist the impulsion forward.

6. The patient is asked to stand on one leg, at first with

his eyes open, afterwards closed. Although man is not made for this position, yet he can balance himself pretty firmly for a little time. The ataxic will experience a great deal of difficulty, and will instinctively call to aid his other foot so as not to fall. If his eyes are closed he will not be able to stand one instant, and if not held would fall heavily to the ground. Such are the symptoms of incipient locomotor ataxy; they will not be all present frequently, but they should be all sought for in order to avoid an error which might have great consequences.

Cholera Infantum.

Physicians coincide in their views regarding the treatment of the summer diarrhoea of infants and children to a degree that enables it to be thus briefly summarized: Diet. emptying the alimentary tract, antisepsis. For the antiseptic treatment, listerine alone, or listerine, aqua cinnamon and glycerine, or listerine, bismuth and mist. a creta, will meet many requirements of the practitioner during the summer months.

The following well-tested formulæ are submitted:

R Listerine 3 i—ii.
Simple Syrup 3 vij—vi.

M. Sig. Teaspoonful every two or three hours.

R Listerine.
Glycerine (c. p.)
Syr. simpl.
Aqua cinamon, aa 3 i.

M. Sig. Teaspoonful every one, two or three hours.

R Bismuth Sub. Nit. 3 ss.
Tr. Opii gtt. xx.
Syr. Ipecac, } aa 3 ij
Syr. Rhei Arom. }
Listerine 3 ss.
Mist. Creta 3 j.

M. Sig. Teaspoonful as often as necessary, but not more frequently than every three or four hours. This for Children, about ten or twelve months old.

The Corpuscle.

RUSH MEDICAL COLLEGE, CHICAGO, ILL.

MEDICAL DEPARTMENT LAKE FOREST UNIVERSITY.

VOL. V.

JULY, 1896.

NO. 11.

PULMONARY RHEUMATISM WITH REPORT OF CASES.*

BY W. H. WASHBURN, M.D., of Milwaukee,

PROF. OF PRINCIPLES AND PRACTICE OF MEDICINE AND CLINICAL MEDICINE IN THE
WISCONSIN COLLEGE OF PHYSICIANS AND SURGEONS, PHYSICIAN TO THE PRES-
BYTERIAN AND EMERGENCY HOSPITALS AND CONSULTING PHYSICIAN TO
THE ISOLATION HOSPITAL.

Discussions bearing upon rheumatic affections are always of interest in medical societies because of the fact that the etiology and pathology of rheumatism are so little understood.

The subject, therefore, of rheumatism presents a variety of questions of speculative, if not practical, importance. Thus we have yet to determine its relations with certain visceral inflammations and neuroses, as well as certain cutaneous eruptions and affections of the mucous membranes.

If a search be made of the text-books of the practice of medicine, even those of most recent date, the student will find little if anything said upon rheumatic affections of the thoracic organs other than of the heart and pericardium. Without entering upon a discussion as to the etiology of rheumatism in general, which would here be out of place, I think we may assume, for the purposes of this paper, that the disease is of microbic origin, no other theory even approximately satisfying the requirements of the case.

Accordingly, this being admitted, it may readily be supposed that the tonsils are a frequent, if not the ordinary avenue by which these microbic-organisms gain an introduction to the tissues and blood of the individual.

*A paper prepared for the Annual Scientific Meeting of the Rush Medical College Alumni, May 26, 1896.

In a very considerable proportion of cases of rheumatic fever, about 80 per cent. it has been found that tonsillitis, to a greater or less degree, has preceded the joint affection, and it is not unlikely that many cases of tonsillitis are distinctly of rheumatic origin, even in cases in which no articular inflammation follows.

If the *materies morbi* of rheumatism be a micro-organism and the tonsillar inflammations preceding rheumatic fever or occurring in rheumatic subjects, are due to the presence in the tonsils of these micro-organisms, then we ought to conclude, *a priori*, that rheumatic inflammation of the lungs themselves would be of not infrequent occurrence. And I am convinced that such must be the case.

The lymphatic vessels leading from the tonsils communicate freely with the deep cervical lymphatics, which in turn communicate with the lymphatics, both superficial and deep, of the lungs, and thus we have an avenue by which these agents may penetrate the substance of the lungs and which may there give rise to inflammation, either of their serous covering or the tissues more proper to the lungs themselves.

I am strongly of the opinion that many of the cases of pleurisy with which we are so familiar, and with the evidences of which we so often meet in the post-mortem room are of distinctly of rheumatic origin.

The cases of rheumatic inflammation of the lungs that have most often found their way into print have been those in which the diagnosis was fairly well established by reason of the fact that arthritis was a factor in the case, but that there may be, and probably are, many in which the rheumatic character cannot be so positively established seems clear.

The cases whose histories are here given have seemed to me to be fairly representative of some forms of pulmonary rheumatism and are now offered for what they may be worth:

CASE I.—L. J. F., aged 30 years and by occupation a retail grocer. Family history good except that the father has had several attacks of rheumatism. Personal history and habits good, previous health also good. In January 1893 he had an attack of acute pleurisy with effusion affecting the left side. As the effusion was not promptly removed by absorption paracentesis of the thorax was performed and recovery followed. The recovery was, however, eventful in this respect, that the left wrist and elbow joints became painful and swollen and later the ankle and knee of the same side presented similar conditions which subsided under salicylate treatment.

In the three years that have elapsed since the original pleurisy he has had several attacks of subacute rheumatism and another pleurisy without effusion.

There is no history of tuberculosis in the family of this patient and there does not seem to be any other tenable explanation of the clinical course of his case except that it was primarily a rheumatic inflammation of the pleura.

CASE II.—Mrs. D. C., aged 48 years, janitress. Had always enjoyed good health, never had suffered from acute rheumatism but had several times during the last few years had articular pains and swelling so that she was incapacitated for her work but was never confined to her bed. She was taken sick in March, 1895, complaining only of general malaise. A day or two later there was some stiffening and pain in the ankles, but no swelling. She began to complain of pain in the region of the heart on the fifth day of the disease. The pain in this region becoming more and more severe, on the evening of the next day a neighbor called upon a physician at his office for something for the relief of the pain. The patient died during the night.

At the post-mortem examination held some fourteen hours later, the conditions found that are of interest in the case were: roughening of the pericardium, with fresh adhesions on both sides and with some increase in the amount of fluid in the pleural cavities; lungs much congested and oedematous, a large amount of fluid exuding on section. The endocardium was normal.

CASE III.—Miss E. B., aged 27 years, dressmaker. Rather slight and delicate in appearance. Upon inquiry it was ascertained that she had suffered occasional attacks of what had been called rheumatic arthritis. A few days before her death last fall she complained of lancinating pains in the left side, of short duration. On the evening preceeding her death she attended church and on the way home stood talking with a neighbor for some minutes so that she was thoroughly chilled when she reached home. Soon after retiring for the night she was seized with a sensation of constriction about the chest, and also with dyspnœa which rapidly developed. Unconsciousness very soon supervened and death closed the scene within two hours, a physician barely arriving in time to witness the end.

On post-mortem examination, the heart was found normal, left side in systole, right in diastole. As to the lungs the ap-

pearances were those of acute catarrh, a large amount of serum exuding upon section.

There were fairly numerous pleuritic adhesions particularly on the left side. There were no evidences of inflammation affecting any part of the heart or its envelopes.

CASE IV.—W. A. H., aged 46 years, white, tailor. This patient was of full habit, well nourished and exhibiting a goodly layer of subcutaneous adipose tissue. There was a history of subacute joint inflammation, though he had never had an attack of rheumatic fever.

Three days before his death he complained to his wife of pain in one of his wrist joints. On the following day the limbs became "stiffened" as he expressed it, but he continued about his work until the evening of the third day, which was Nov. 15th. 1895, at which time he began to suffer from lancinating pain in the left side and soon thereafter dyspnoea became a prominent symptom. The dyspnoea gradually increased in severity until the family, becoming alarmed, hastily summoned a physician who arrived only a few minutes before the death of the patient.

At the post-mortem some hours later the heart was found to be somewhat hypertrophied but otherwise normal. Pleuritic adhesions were found about the left apex. The lungs were much congested and oedematous, a large amount of serum escaping upon section.

CASE V.—Mrs. S., aged 45 years. When eleven years of age she had a very severe attack of rheumatism but made a good recovery and was in good health from that time until January 1896. In January 1896 she complained of pain in the wrists and in some of the phalangeal articulations, which was followed very shortly by swelling, and this, within a few hours, by involvement of the ankles and one hip. Thirty-six hours of salicylate treatment resulted in the almost complete subsidence of the articular disturbance. On the fourth day of the disease dyspnoea became a prominent symptom and physical explorations elicited the signs of pericarditis, pleuritis, and lobar pneumonia involving the lower lobe of the left lung. Later the lower lobe of the right lung also became involved in the pneumonic process.

There being very grave interference with the heart's action by reason of the pericardical effusion, paracentesis of the pericardium was performed by the attending physician with whom I saw the case in consultation, but, though temporary

relief followed the operation, death ensued the following day from pulmonary oedema.

I am, of course, aware that there are not wanting grounds upon which to challenge the diagnosis in any one of these cases, with the exception of case V.

As stated at the outset, there is much yet to be learned respecting the disease under consideration. Rheumatic fever, as is well known, may cause death and the autopsy fail to show any morbid change to account for the fatal issue, so that until we are able to isolate the *materies morbi* of this affection our diagnosis must remain to a certain degree open to dispute. The clinical histories here detailed are, it seems to me, such as to point very strongly indeed in the direction indicated.

It is probable that rheumatic inflammation of the deeper structures of the lungs is of much less frequent occurrence, but that such inflammations do occasionally present themselves will be admitted by all who have had much experience with this affection. The transitory duration of many of these inflammations lends additional strength to the view that they are caused by the rheumatic *materies*. Moreover, the success that has attended the administration of the salicylates in the treatment of pleurisies, both with and without effusions, would tend in the same direction.

The records of the cases here given agree substantially with the published reports quoted by Garrod in his work on rheumatism.

The onset was sudden, alarming, and very rapidly fatal, there being no premonitory symptoms that served as a warning of what was coming.

In case V, the pulmonary affection occurred at a time when the articular inflammation was pursuing a mild and favorable course and the patient was well under the influence of salicylates. In this case the pleuro-pneumonia may be regarded as a secondary complication of the pericarditis, but in two of the other fatal cases the acute oedema of the lungs occurred without the co-existence of any cardiac lesion.

THE USE OF THE OPHTHALMOSCOPE BY THE GENERAL PRACTITIONER.

BY DR. H. T. PATRICK OF CHICAGO.

The discussion of Dr. Wescott's paper published in the May CORPUSCLE and read by invitation before the Section of Pathology, of the Chicago Academy of Sciences, December 23, 1895.

Mr. President and Gentlemen:

I thank you for your flattering invitation to say something of the use of the ophthalmoscope in nervous disease. In return I shall endeavor to avoid dry technicalities and to mention only such points as may be of use to every physician. No neurologist worthy of the name can practice without the routine use of the ophthalmoscope, and as every general practitioner must be a neurologist as well as a gynæcologist, obstetrician, dermatologist and what not, he too, if he would do good work, must be familiar with the instrument and know something of the things he sees with it.

In neurology the interest of ophthalmoscopy centers about the choked disc.

As specific examples are generally more instructive and stick better in the memory than broad generalities, I beg your kind indulgence while I mention with the greatest possible brevity a few cases seen within the last year. They will serve at once as a practical introduction and as fair illustrations of the value, as well as of the limitations, of the ophthalmoscope in neurology, for the instrument has its limitations as well as its uses. It is an efficient ally and may enable us to make a diagnosis when other means fail, but alone it is not enough, and as we are to count it only one of the many diagnostic aids, mental or mechanical, in our professional armamentarium.

Last spring I was asked to see a girl of 17 who had severe headaches, and had had several peculiar convulsions, the character of which led her physicians to suspect hysteria. A careful review of the history and a careful examination pointed rather to tumor of the brain, and an examination of the eyes showed choked discs, which certainly excluded hysteria and made the diagnosis of tumor almost certain.*

*Since the above discussion the case has come to autopsy which confirmed the diagnosis.

The young man whom you have just had the opportunity of examining, came to us because of failure of vision only. Examination, as you have seen, revealed choked disc which led to examination for other symptoms of tumor which were then found.

Shortly before I saw the young girl whom I have just mentioned I had referred to me a man aged 34, who had been seen by two most excellent physicians. He complained simply of headache, occasional vomiting and some slight tingling now and then on the right side. One doctor gave him something for his stomach, the other something for headache. He had a sudden slight apoplectic attack with right hemiplegia and aphasia at which time I first saw him and found double choked disc. Careful inquiry then elicited a history that comported well with the diagnosis of tumor and an approximate localization was not difficult. He was put on active specific treatment to exclude gumma before operation, when three days later he had a second apoplectic stroke evidently from thrombosis due to the tumor, with complete hemiplegia, total aphasia and hemianopia—a condition for which an operation can do but little. Had an ophthalmoscopic examination been made earlier in this case it is possible that the tumor might have been located and removed, saving the man from subsequent total disability.

I saw a few weeks ago with Dr. Colburn a boy who had in a short time lost the sight in the left eye and was rapidly losing it in the right. Examination of the nervous system was absolutely negative. Now this sort of thing occurs, especially in young people, as one of the symptoms of hysteria, but Dr. Colburn could make out a blurring of the discs and a few days later Dr. Mahoney, his assistant, found unmistakable choked discs which at once definitely excluded functional disease—or at least was positive of organic trouble, a decision which the subsequent course of the case confirmed.

A few days ago I saw with Dr. Manierre, Jr., a young lady who had complained for several days of severe headache with vomiting. Headache and vomiting are symptoms that occur in a multitude of affections. Examination showed choked discs which at once excluded a number of these affections. The choked discs did not serve to make the diagnosis but they brought us near to it.

Last summer I saw through the kindness of Dr. Henrotin, a young married man who was said by one of the very best and most careful diagnosticians in this city to have arterio-sclero-

sis. True, he did have some arterio-sclerosis, but a glance at the optic discs would have shown at once that that was not his principle trouble. He had pronounced choked discs and the case ran the typical course of a rapidly growing brain tumor, probably carcinoma.

On two different occasions in probably the largest nervous clinic in Germany I was enabled to correct a false diagnosis by an ophthalmoscopic examination. Both were cases of brain tumor.

Now for the reverse side of the shield. Some months ago Dr. John Bartlett sent a young man to me who was having severe epileptic fits. I saw him in a number of these and they were distinctly of the Jacksonian type; i. e., they pointed to a gross lesion of the cerebral cortex. I at once suspected a gumma and he had a clear syphilitic history, but the optic discs were normal and principally on this account I made a diagnosis of local meningitis and not of tumor. He improved (but was not cured) under treatment and he went to a neighboring city where he died suddenly. A post mortem revealed a tumor, said to be as large as a hen's egg exactly in the location I had indicated. In this case the negative result of the ophthalmoscopic examination led to a wrong diagnosis.

Nearly a year ago Dr. Wm. H. Wilder, than whom there is certainly no more careful and competent ophthalmologist, sent me a young lady supposed to be suffering from brain tumor. She had obstinate headaches, vomiting, dizziness, impaired vision and double choked discs. After a careful examination I was inclined to think that the whole might be due to anæmia. I examined the blood and found the girl had only one half the hæmoglobin she was entitled to. Her symptoms, including the choked discs, cleared up under iron, fresh air and improved nutrition. In this instance then the ophthalmoscopic findings led the diagnostician astray.

Before mentioning in detail some of the more important relations of choked disc to nervous diseases, I would like to venture a few practical hints gleaned from my own experience, as to the use of the ophthalmoscope.

1. Never be satisfied with an imperfect view of the fundus; and to get this, unless you are an expert, you must dilate the pupils. Then do not be in a hurry and do not desist until you have seen all the details.

2. Whether or not you use the indirect method always examine by the direct, as a very slightly choked disc may es-

cape recognition by the former method. Personally I very seldom use it.

3. Unless you have become very skillful and have had a most extensive experience such as our friend Dr. Wescott, do not make a diagnosis of hyperæmic, congested or pale discs; in other words, never draw conclusions from the color of the disc alone. It normally varies enormously; as much as does that of the cheeks of your friends as you meet them on the street.

4. For us who are not among the most distinguished of ophthalmologists, optic neuritis and choked disc are interchangeable terms as far as the appearance of the fundus are concerned. There is said to be some difference between an optic neuritis due to the propagation of inflammation from a lesion affecting directly the optic fibers and choked disc due to a distant lesion, but we would do well not to attempt to make the differential diagnosis with ophthalmoscope alone.

I have been greatly interested in Dr. Wescott's demonstration of artificial eyes and his method of using them for instruction. They are doubtless a valuable aid to the student. But ingenious, convenient and useful as they are, I wish to say with some emphasis that they are not necessary. Any practitioner who has an ophthalmoscope may learn to use it well at the cost of a little time and patience. It is not difficult. When I left medical college I had never tried to see the fundus, I believe I had never seen any one else try, but as a hospital interne I soon learned that the use of the ophthalmoscope was a good thing to know and began to practice on the patients. Practice on yours. Practice on your office girl, on your servant girl, on your friends. Your patients will not resent it; will rather esteem you for making so thorough an examination. The dilatation of the pupil caused by cocaine is ample for the purpose and disappears in a few hours.

To return to choked disc. The presence of the choked disc nearly always indicates one of three diseases; tumor, abscess or meningitis. Tumor of course including gumma and the meningitis may also be due to syphilis. The majority (four-fifths) of cerebral tumors develop choked disc at some period of their course and the majority of choked discs are caused by tumors. But the choked disc may occur late in the course of neoplasm, even as late as nine years after its inception. It is always a more or less transient condition, terminating either in optic atrophy or recovery. An optic neuritis

may develop very rapidly after the tumor has existed for a long time. In a general way a rapid development of choked disc means a rapid development of the tumor and vice versa. So in a case in which the symptoms of tumor have existed for a long time and choked disc suddenly makes its appearance and develops rapidly the prognosis would be bad. Tumors which invade by pressure and displacement only, not by infiltration, are not so apt to produce optic neuritis, possibly because they are ordinarily of slow growth. Tumors springing from the dura-mater and those of the vertex are not so apt to produce optic neuritis as are those in the substance of the brain and at the base. Hence, in an old case of tumor in which there is no optic neuritis, the growth is probably of the vertex and superficial; that is, operable. Choked disc perhaps in the majority of instances develops first and is more intense on the same side as the tumor but the reverse is occasionally found. Aside from the secondary optic atrophy subsequent on choked disc the tumor may cause primary or simple atrophy, but only when it involves directly the optic nerve itself. It may be well to note that we may have a combination of these two conditions.

In hydatid cysts of the brain optic neuritis is frequent. In aneurism it is rare and occurs only when the aneurism is contiguous to the optic nerve or the optic tract. In hydrocephalus it is very rare. When I was an interne we had a case which apparently a typical one of the hydrocephalus and the child had choked discs but the autopsy showed that it was a case of extensive meningitis with large effusion—a so-called external hydrocephalus which should not be classed as hydrocephalus at all.

In epidemic cerebro-spinal meningitis choked disc is rare. In tubercular meningitis of the base, optic neuritis may appear and may even precede the other symptoms of the disease, but it is rarely very pronounced. There may also be tubercles in the choroid but they are exceedingly rare in this disease, being more often found in general tuberculosis without meningitis. In syphilitic meningitis the choked disc is slower in development but reaches a more intense degree. In pachymeningitis the examination of the fundus is generally negative.

What has been said regarding choked disc in tumors of the brain applies equally to abscess except that it is not so frequent in the latter lesion and is more apt to be limited to, or decidedly more intense upon the same side as the lesion. It is worthy of note that choked discs may appear in caries of the

temporal bone when there is neither abscess nor meningitis.

There is a certain chronic cerebritis which may sometimes simulate brain tumor and in which we frequently have choked disc.

In cerebral hemorrhage, embolism and thrombosis there is choked disc only when the lesion is indirectly connected with the optic fibers, except that it sometimes occurs as a concomitant condition and is then due to co-existing Bright's disease or arteriosclerosis. But we must remember that an apoplectic attack may be the first symptoms of a tumor of the brain, due to a hemorrhage or acute softening within or around the tumor. In such a case of apoplexy we would probably find choked disc due not to the apoplexy but to the tumor.

You have probably seen it stated that in persons who have military aneurisms of the cerebral vessels, similar small aneurisms may be discovered on the retinal arteries, but this is not true or, at least if they are ever present, they belong to the rarest clinical curiosities. What we do see occasionally are small extravasations of blood, but these are often in patients who never have cerebral hæmorrhage.

It is a curious fact that optic neuritis may appear in acute or sub-acute myelitis when there is no discoverable anatomical connection between the cord and optic lesions.

Moderate choked disc occurs in a certain percentage (said to be as high as 8 to 10 per cent) of ordinary chorea. As we have seen, it may be a symptom of simple anæmia.

One word regarding optic atrophy. At least 50 per cent of all cases of simple optic atrophy show symptoms of spinal cord disease. Charcot was of the opinion that it is always due to locomotor ataxia. It is a singular fact that this optic atrophy occurs as an early symptom of locomotor ataxia and that when it does occur the other symptoms of the disease remain stationary or never appear. Dejerne calls these "cases of tabes arrested by blindness." Of 400 cases of locomotor ataxia from Erb's private practice 6.75 per cent showed optic atrophy. Of 178 cases collected by Grower's, 14 per cent presented this lesion. The latter author mentions cases in which the other symptoms of locomotor ataxia did not appear until 16 and 20 years respectively after the supervention of blindness, but it is not specifically stated that the knee-jerks were present, and our present knowledge would lead us to infer that they were absent.

TOAST—"OUR ALMA MATER."

BY PROF. J. B. HAMILTON, at the Banquet, in the Auditorium, May 27, 1896.

Mr. President, Fellow Alumni, and invited Guests:

We celebrate to-night the 52nd Annual Commencement of Rush Medical College. We see around us many of our classmates of twenty-seven years ago, many fratres of earlier or later classes. Men are with us, as our guests, distinguished above their fellows in education, in oratory and in affairs. They are here to testify their sympathy with Rush Medical College in its aims toward higher medical education, and to rejoice with us in the steps already taken.

I am not commissioned by the Faculty to make any authoritative statements, nor have I had time to examine the college records, so that any remarks I may make to-night are to be regarded entirely as an individual expression. I speak to-night as an alumnus, not as a member of the Faculty.

The history of the progress of Rush Medical College, from its foundation in 1836 to the present time, is full of interest and suggestion, and when we consider that the ultimate test of education is its value to mankind, it must be admitted that Rush Medical College stands that crucial test well. There is, and has been from time to time, a criticism of our own and other schools, as to the insufficiency of the medical teaching. These critics rarely stop to think that the character of the education of the Rush student has heretofore been based scarcely less on his environment than upon his own necessities. When a statue is made, the niche which it is to fill, governs its size, and when the young graduate had to settle among tillers of the soil and villagers without special education, what need was there for a high preliminary entrance test, that would require him to *waste* years in the acquirement of a knowledge of the superstitions of the ancient Greeks? When there was little education of the people generally, why should the doctor so far outstrip them.

When Daniel Brainard and James Blaney taught surgery and chemistry in the old Dearborn St. school, they were furnishing the essentials, but year by year the terms have lengthened;

the amount of instruction given, has increased. With the increase of days and hours of instruction in the Medical College, the necessity for higher preliminary education has become apparent. The development of some of the specialties, such as chemistry, physiology and ophthalmology, require for their proper understanding, a fair knowledge of physics and mathematics. To properly understand anatomy and embryology as now taught, some knowledge of the Greek and Latin tongue is absolutely necessary, because scientists throughout the world have to a limited extent agreed to a common nomenclature.

These new requirements, these changes, have come with equal pace with the developments of the high school, the academy, the college and the university. The young doctor when he leaves the medical school was and is still equal to his best neighbors in general education, plus a medical education. When he goes too far in medical realms, he lives in another world, quite too remote to keep in touch with his neighbors. This is the key with which to explain the failure of the young professional man, who deeply desirous of more knowledge, and more culture, goes abroad, remains a few years, returns, lives in a different mental atmosphere from his neighbors, is misunderstood, unappreciated, naturally becomes misanthropic and fails.

Although it is evident that those responsible for the curriculum of Rush Medical College have kept steadily to the line of utility in medical teaching, and borne in mind the nature of the environment of the graduates from year to year, yet for the last few years it has become apparent that some of the teachers at least have not agreed that everything should be sacrificed to mere utility, and, as is well known, the emotional side of the man should be developed. We have seen the donning of the cap and gown, the establishment of athletic games, the organization of college secret societies, (the Nu Sigma Nu and the Phi Sigma Rho) and the affiliation with the Young Men's Christian Association. But there is a danger line in these extraneous educational aids, beyond which the student becomes a general rather than a special student. Music, painting, sculpture and poetry appeal to and develop the emotional side of man, but as Herbert Spencer said "these efflorescences of civilization, should be wholly subordinate to that knowledge and discipline in which civilization rests, and as they occupy the leisure part of life, so should they occupy the leisure part of education."

It was my good fortune, Mr. President, to be present at the opening of that noble building completed by the Faculty of this college on the corner of Dearborn and Indiana streets in 1867. At that time there was no medical college building equal to it, and the old building which it adjoined was remodeled and given up to Anatomic and chemical instruction. The mayor of the city, the Hon. J. B. Rice, made a speech at the opening, in which he said on behalf of the trustees and the Faculty: "We erect here a grander temple than was of old erected to Aesculapius or Hygeia, for it shall be devoted and dedicated to the sacred cause of humanity." How well this college has fulfilled its trust! The purposes of that dedication I verily believe, have been kept steadily in sight from that day to this.

The storms and financial difficulties through which this college has successfully passed, give eloquent tribute to the courage and faithfulness of the Faculty and trustees. The new building of 1867 was destroyed by the great fire of 1871 in the opening week of the college term. The professors of that day, undismayed by the great calamity, bravely took upon themselves the erection of a temporary building on 18th St., in the grounds of the County Hospital, and there—"under the sidewalk"—they taught without interruption, and during that time planned a new building, the present one, corner of Congress and Wood streets. When this building was finished again the professors became personally liable for the funds necessary to construct it and without a murmur, they met the obligations as they fell due. A short time elapsed when it was observed that the school could not control the clinical teaching in the County hospital, and the arrangements were not in accordance with their views; whereupon they gave away the unused portion of their grounds, without regard to future needs, mortgaged the college building for forty-five thousand dollars Hospital bonds, and the magnificent Presbyterian Hospital is the result of that beginning. In the year 1891, when nearly every Eastern medical college had been aided by the hand of private philanthropy, to erect a laboratory for the study of the new field of bacteriology, no aid was visible here, but the Faculty once more devoted the entire earnings of the school for a period of three years toward the erection of the present beautiful structure on Harrison street and taught without fee or salary.

When it is remembered that no member of the Faculty has any right to the college property, and also that the sole title to Rush Medical College and its equipment is held in trust by

the trustees and their successors in office forever, the benevolent character of these repeated personal sacrifices by the members of the Faculty is apparent.

Here is an institution, that without endowment gift, or outside encouragement beyond the confidence of the people, and the love and respect of its alumni, has advanced step by step in the face of uncommon difficulties to a position equal to any American institution of its class, and in some respects equal to any elsewhere.

What nobler tribute can be paid to Brainard, the founder, his coadjutors and their lineal successors, than the history and record of Rush Medical College? I stand here not to eulogize this noble institution, but simply to place on record these facts.

Many of the Eastern medical colleges have had buildings given them, and chairs endowed. Philanthropists and moneyed men have vied with each other in wise liberality toward their medical colleges, but here, the hand of Sir and Lady Bountiful has never been opened in the direction of its oldest medical college. The college has flourished, but at the expense of the life labor of its teaching faculty.

But we came here, Mr. President, not to eulogize or condemn, but to sing gently the praises of our Alma Mater, to have our annual reunion, to fraternize and to enjoy this hour, which unfortunately only comes once a year; so now with music, song and eloquent speeches which are to follow, let us be happy. If our local philanthropists, like some of the blooded kine amid pastoral scenes, shall fail to yield milk even to the hand of the experienced milker, let us forget our wants and leave the matter to Posterity—Posterity, the Sweet Child! We well know who its father is and our faith in its stock, leads us to believe that its burdens will be well borne. Let us to-night indulge in pleasant reminiscences and recall that Brainard in his day received the prize at the Paris Academy, that De Laskie Miller was president of the section of obstetrics at the International Medical Congress at Washington, that Senn's Latin thesis obtained *Magna Cum Laude* at Munich, and that Lyman, Hyde, Senn, and Ingals have written books which are as lamps to the wayfarer. Last but not least, the announcement has just been made that the Rush diploma has had its just recognition at the hands of the Board of Examiners of the Royal Colleges of Physicians and Surgeons of England.

Finally, as we have so much to be thankful for, let us conclude in the language of the Bohemian Club of San Francisco, "May the Lord love us, and not call us too soon."

PROF. EDWIN KLEBS.

The removal of Professor Klebs to Chicago has been signaled by his immediate appointment as Professor of Pathology in Rush Medical College and in the Post-Graduate Medical School. This distinguished bacteriologist is already well known in America, but as a reminder to our readers of the valuable services of Professor Klebs, we append a list of the titles of some of his more important papers. His appearance is that of a well-preserved, good-humored, scientific gentleman, without a tinge of brusqueness or hauteur, still in vigorous manhood.

America, and particularly Chicago, should be congratulated on this notable acquisition to the teaching force of the Northwestern metropolis.

KLEBS, EDWIN: *Hanbuch der Pathologischen Anatomie*, Berlin. A. Hirschwald, 1868-80.

Beiträge zur Pathologischen Anatomie der Schusswunden Nach Beobachtungen in den Kriegslazarethen in Carlsruhe, 1870-1871. Leipzig, 1872.

Studien über die Verbreitung des Cretinismus in Oesterreich sowie über die Ursache der Kropfbildung. Prag, 1877.

Ueber die Umgestaltung der Medicinischen Anschauungen in den letzten drei Jahrzehnten, Vortrag. . . . Nebst einem Vorwort enthaltend die Entgegnung auf Virchow's Rede über Die Freiheit der Wissenschaft im Modern Staat. Leipzig, 1878.

Ueber Cellularpathologie und Infectiouskrankheiten. Prag, 1878.

Ueber Cholera Asiatica. Nach Beobachtungen in Genua. Basel, 1885.

Die Trinkwasserversorgung der Stadt Zürich und ihren Ausgemeinden, 1885.

Die Causale Behandlung der Tuberculose. Pp. 500: Leipzig, 1894.

Klebs was also editor of the *Correspondenz-Blatt für Schweizer Aerzte*, in 1871. His work in the Berne Pathologic Institute (Würzburg, 1873) and with Tommasi-Crudelli on Malaria are of international interest.

His great work on General Pathologie, Jena, 1886, is, how-

ever, that on which his fame will chiefly rest. The fact remains, however, that at this time Professor Klebs, in Pathology, is second only to Virchow.—*The Journal of the A. M. A.*, June 20, 1896.

PRESIDENT WILLIAM R. HARPER BEFORE THE BANQUET IN THE AUDITORIUM, May 27, 1896.

President Harper of the Chicago University, was introduced, and after extending greetings from the new university to "OLD RUSH" and to the large class of '96, spoke very acceptably on the subject of "Medical Education."

He said in substance: We are all interested in education. The same principles are involved whether it be medical or technical, legal or theological education.

The importance of preliminary training must be emphasized, During the past ten years wonderful changes have been made in all departments of education. While medical colleges are demanding more extended preparation than formerly, so are the other professional schools, and yet greater requirements must be made. Men who enter professional fields must be willing to sacrifice much time and labor to adequate preparation.

Laboratory practice is rapidly taking the place of the lecture and text book. Ten years more will see the departure of the old lecture and text-book method. The work in science demands the laboratory.

Original investigation must become a part of our system before we can hope to take our place beside the German University. America must have investigators. We are slow in acquiring this condition because of a lack of money. Poor men, and students are usually poor, can not continue their studies without endowed fellowships and scholarships. Why do not men of money see that the most magnanimous use to which they can put their resources is to alleviating pain and suffering? Private means must do for medical education in this country what the state does abroad. There can be no more practical use for money than this.

Why should not Chicago be the center of this highest kind of medical work? Let one of her schools be endowed with two or three million dollars and she will become the greatest medical center in this country. The success of one institution lifts

up others and so would the whole educational system be benefited thereby.

There is no nobler work than that of medicine, for the healing art was consecrated by that ideal man, Jesus, the Christ

TO THE CLASS OF '96.

BY T. FRANCIS CONROY, A M., M. D., Chicago.

Weaving at their fateful looms,
O'er the regions of the dead,
Mingling shimmering lights and glooms,
Sang the sisters dread—
Sang the fatal sisters three
Crooning in strange harmony,
As their shuttles sped:

'Weave we in both good and ill!
Life and Death must struggle still,
Day must darkness follow!
He whose life thread now we wind
Shall our destined knots unbind—
All our art is hollow!
Lo! the Fates no more are blind
As the threads of life are twined
For Aesclepios, son of Apollo!

So sang the Fates in that half-twilight time
That clothes with glamour Greece's golden prime,
When the dim prescience of the strange career
Of the world's first physician—from the drear
And hopeless mists of destined changeless ill
Grew to a vision, where the iron will
Of one strong mortal fought with lowering Doom
And snatched a victim from the open tomb.

By no blind fates our threads of life are woven
Nor is Art powerless Disease to stay
And often hath the dart of Death been cloven
On the physician's shield before the prey.
For Life and Death are complex in their notion
As two correlatives that point a phrase,
Not sundered by a world-dividing ocean
But as two combatants that stand agaze.

Who is the hero, deft as lion-hearted,
To aid Life in his struggle with the foe?
This the physician's task! No lance is darted
But warrior like he wards the lethal blow.

Hark, the rhythm wonderful
 As they spin the carded wool:
 'All our art is hollow!
 Lo! the Fates no more are blind
 As the threads of Life are twined,
 For Asclepios, son of Apollo!'

Well do these words the noble Art portray
 That smooths the brambles from Life's thorny way,
 That cheers the sufferer on his couch of pain
 That gives sweet lustre to the eyes again,
 Brings back the roses to the pallid cheek,
 And vigor to the frame all bent and weak.
 Not the Physician's lot 'mid shady groves
 To list the cooing of the mating doves,
 To lie on the lush grasses by the stream,
 Wrapt in the meshes of a roseate dream!—
 No! where the cry of human pain ascends,
 Where fell Disease on Poverty attends,
 Where the fierce conflict between Death and Life
 In varied forms of agony is rife—
 There the Physician's place! Like red-cross knight
 He rushes in the thickest of the fight,
 Fearing nor wounds nor death—can he but aid
 A stricken mortal with his trenchant blade.
 HUMANI NIL ALIENUM! is his cry—
 Men are my brothers—none shall helpless die!

And you my classmates! whom a high desire,
 Caught from the altar's sacrificial fire,
 Hath thus impelled to don with doughty heart
 The armor of the Aesculapian art,
 Behold your mission! Be your battle cheer
 HUMANI NIL ALIENUM! Void of fear
 Pursue the noble way your duties trace,
 As benefactors of the human race.
 Be champions, consecrated to the strife
 That ever wages betwixt Death and Life:—
 Life with its teeming cells of myriad form,
 Crowned in the man, yet sacred in the worm,
 Descending still as revelations ope
 New realms beneath the keen eyed microscope,
 Into new worlds of sight—abysmal space
 Still waiting a Columbus of our race.
 Happy the mortal who, with star-like mind,
 Shall cast the light of genius on the blind
 And groping problems of this mystic frame
 Where Life and Death in gladiatorial game,
 Strive for the mastery! Your armor don

THE BANQUET.

My classmates! Lo, your battle is begun.
 Be it of us by Death's remorseless tongue
 As by the Sisters Three in mystic meaning sung:

'He whose life thread now we wind
 Shall our destined knots unbind,
 Day will darkness follow!
 Lo! the Fates no more are blind
 As the threads of life are twined
 For Aesclepios, son of Apollo.'

THE BANQUET.

The Joint Banquet of the Faculty and Alumni of RUSH was held at the Auditorium Hotel, May 27th, 1896. There were in the neighborhood of five hundred present and the whole affair was arranged with most excellent taste. This Annual Banquet has come to be one of the most interesting events of commencement week; it is a feast for both mind and body. From the happy remarks of President Gudden's introductory address to the inspiring "Alma Mater," the program was one of continuous interest. The music by RUSH's students of the quartette and the mandolin club was an entertaining feature of the evening. We give below the menu and the program. The addresses of President Harper of the Chicago-University and Profs. Hamilton and Cotton may be found elsewhere.

MENU.

Little Neck Clams
 Cream of Peas, St. Germain
 Radishes and Olives
 Fillet of Whitefish, Venitienne
 Potatoes Duchesse
 Patties of Sweetbreads, Montglas
 String Beans
 Punch Thermidor
 Roast Tenderloin of Beef
 Potato Croquettes Lettuce Salad
 Fancy Ice Cream Assorted Cake
 Coffee

PROGRAM.

DR. B. C. GUDDEN, '79

Presiding.

SONG.—“Good Old Rush.” Everybody.

“Verse sweetens toil, however rude the sound.”—*Gifford*.

ADDRESS.—“The Old and the New.” . . . Dr. B. C. Gudden, Class of '79.

“Great souls by instinct to each other turn

Demand alliance and in friendship burn.”—*Addison*.

MANDOLIN CLUB.

“There's music in all things if men had ears.”—*Byron*.

“Where Am I At?” Dr. J. E. Cox, Class of '96.

“Noble friends and fellows whom to leave is only bitter to me.”

—*Shakespeare*.

SONG.—“Mrs. Winslow's Soothing Syrup.” . . . Rush College Quartette.

“The hidden soul of harmony.”—*Milton*.

“Medical Education.” President Wm. R. Harper.

“Orthodoxy is my doxy; heterodoxy is the other man's doxy.”

—*Waburton*!

MANDOLIN CLUB.

“Music do I hear? Ha! Ha! Keep time.”—*Shakespeare*.

“The Doctor.” Dr. A. C. Cotton, Class of '78.

“Laboring for relief of human kind.”—*Dryden*.

SONGS.—a “Annie Laurie” Rush College Quartette.

b “A Story of a Country Doctor.”

“Music, when soft voices die, vibrates in the memory.”—*Shelley*.

“Our Alma Mater.” Dr. J. B. Hamilton.

“There is a divinity which shapes our ends.”—*Shakespeare*.

SONG.—“Alma Mater.” Everybody.

ALMA MATER.

(The song “Alma Mater” was composed for RUSH's Alumni, and was sung for the first time at the close of the Banquet)

Air: “Lauriger.”

Our Alma Mater's heart is great,

By thousands do her sons arise,

Her glory doth illuminate

All who her gift of wisdom prize.

Heroic in the strength she shows,

She sends them forth to fight,

Gives each her blessing as he goes,

And girds him with her might.

CHORUS:

O, Alma Mater, lend to-night

Thy strength to each, who'll borrow;

To sons grown old, who've fought the fight,

And those who leave tomorrow.

Our Alma Mater's love is strong,
 Her sons shall ne'er forsake her,
 Who loves her once shall love her long,
 What coward would desert her.
 She gives to all her riches vast,
 Her gifts are ne'er withholden,
 Her "Fiat Lux" while memory lasts,
 Shall every son embolden.

CHORUS:

O, Alma Mater, speed to-night,
 The sons who leave thy care,
 To add new lustre to thy light,
 And keep thy honor fair.

Our Alma Mater's halls are wide,
 And every son returning,
 Will meet a welcome warm, inside,
 And find her hearth fires burning;
 Forever shall her walls extend,
 And bright the smile she'll give him,
 Who coming home, a faithful friend,
 Shall bring a new son with him.

CHORUS:

Ho! all ye faithful sons rise up,
 Your Alma Mater greets you;
 Rise up and quaff a loving cup
 Before you say "Adieu!"

—L. W. R.

THE FACULTY AND OTHER ITEMS OF INTEREST.

President E. L. Holmes will probably sail for England the middle of the month where he hopes to fully recuperate his strength.

Prof. J. H. Ethridge may attend the *International Congress of Gynecologists*. Dr. Ethridge has the distinction of being one of the honorary vice-presidents of this illustrious body.

Prof. James Nevins Hyde will attend the *International Dermatological Congress* in London, July 1st.

Dr. Nicholas Senn will go West to spend his vacation.

Profs. Ingals, Brower, and Hamilton will take short trips in this country during their vacation.

Prof. Walter S. Haines sailed for Europe, June 20. He will seek recreation in his travels through Norway and Sweden,

will visit St. Petersburg and Moscow returning via Berlin and Paris.

Prof. Norman Bridge is enjoying a summer abroad.

Prof. Ludwig Hektoen and Dr. E. Le Count are working in the Paris laboratories. They will be back for the opening of the college.

Prof. John M. Dodson, wife and son are in Germany.

Dr. Ingals gave a reception in his elegant new home Wednesday evening, June 10, to the Faculty and Alumnae of the North Western University Woman's Medical School. Sweet music, delicious refreshments and interesting conversation made the evening pass away too soon. Those present unite in their praise of Dr. and Mr. Ingal's hospitality.

Dr. Charles A. Parker has proven himself an excellent instructor in anatomy. At the late Cook County Hospital examinations, the two taking the highest grades in anatomy were the two successful lady candidates, pupils of Dr. Parker in the N. W. U. Woman's Medical School. Two of the four appointed prosectors and two of the three receiving honors in anatomy at the late commencement of RUSH were the Doctor's pupils.

Miss Rutherford will spend her vacation in Iowa and in Southern Illinois where her home is located.

We are in receipt of the essay on "Tuberculosis of Bones and Joints" by Edmund F. Burton, '97. This excellent essay was awarded the L. C. P. Freer second prize at the last commencement. It will be published in the CORPUSCLE.

Rev. Jesse M. Yonan, '97, will address the National Christian Endeavor Association at Washington, D. C., Monday, July 13, 1896. Mr. Yonan had the same honor accorded him last year at Boston.

Geo. L. McDermott, Sec. Class '97, will be at his home in Neenah, Wisconsin for a few weeks after which he will be an attendant in the State Hospital at Oskosh, for two months.

President Stewart, '97, is traveling in the East during the vacation months.

Quite a number of the students of '97 are in the city attending clinics and taking special laboratory courses.

Alumni Department.

JAMES B. HERRICK, A. B., M.D., EDITOR.

MEMBERSHIP IN THE ALUMNI ASSOCIATION OF RUSH MEDICAL COLLEGE is obtainable at any time by graduates of the College, providing they are in good standing in the profession, and shall pay the annual dues, \$1.00. This fee includes a subscription to THE CORPUSCLE for the current year. This journal is the official organ of the Association.

Dues and all communications relating to the Association should be sent to
JOHN EDWIN RHODES, M.D., Sec'y and Treas., 34 Washington St., Chicago

With this number the CORPUSCLE is discontinued to all Alumni subscribers who have not renewed their subscriptions by sending One Dollar to Dr. J. Edwin Rhodes, 34 Washington St., Chicago, to pay dues of Alumni Association and subscription to the CORPUSCLE for one year.

WHERE THE MEN OF '96 WILL SETTLE.

F. N. Brett, Green Bay, Wis.

C. E. Hemingway, Oak Park, Ill.

H. P. Fitzpatrick, 1048 Washington Bov'd., Chicago.

H. R. Sugg, '96, will be interne at the Polyclinic Hospital, Chicago, during the next year.

A. L. Smith will be interne at the Provident Hospital on the South Side, Chicago.

C. R. Bechman went into the St. Augustana Hospital June 1st as interne.

H. A. Brennecke acted as house surgeon for St. Augustana Hospital for a couple of months previous to entering Cook Co. Hospital as Interne.

Dr. Spencer Beebe will be at his home in Sparta, Wis., until taking up his work as interne in the Presbyterian Hospital.

Dr. O. H. Arndt, Sheboygan, Wis.

Dr. F. A. Guthrie (J. W. Freer medal for '96) has formed a partnership with Dr. J. M. Wallace of Aledo, Ill., and has already enjoyed good success.

Dr. Geo. R. Proctor has formed a partnership with Dr. A. E. McBride at Coleta, Ill.

Dr. Willard D. Brode has bought the practice of Dr. Ed-

ward Thayer, '92, at Union Mills, Indiana. It is a place of 1,000 inhabitants with but one other physician.

Dr. E. P. Leresche is located at 877 Spaulding avenue, Chicago.

Dr. C. C. Rogers is located at 941 W. Van Buren St., Chicago.

A. E. Field, '95, is located at Plattville, Ill., and doing well having lately delivered a woman of triplets which are thriving.

F. R. Frazier, '95, of Yorkville, Ill., attended the Commencement at Rush.

J. E. Porter, '95, came in from Clarke City, Ill., to attend Commencement at Rush.

A. M. Larkin, '84, is located at Yale, Iowa. Dr. Larkin has been taking a post-graduate course during the Spring.

W. C. Bowers, '82, is at La Place, Ill. He was at Commencement and reports a prosperous practice. The doctor has been doing post-graduate work at Rush.

Dr. H. B. Hill, '95, is with Dr. Ingals acting as an assistant. We were glad to welcome him to Commencement exercises.

Dr. Pattee, '95, was in from South Bend, Indiana, during Commencement week.

A. B. Tashjean, '95 Rush and '84 Bennett Medical, has been back this spring taking another post-graduate course. Others would do well to emulate his example.

Dr. F. P. Lierle, '94, who is located at Marshalltown, Ia., attended Rush Commencement this year.

Dr. J. S. Billings, '83, was present at graduation exercises, having come in from Bellville, Kansas, to take a post-graduate course.

Dr. W. D. Calvin, '95, ex-editor of the CORPUSCLE, was here Commencement week, and reported a good practice at Riverside, Ill.

We are pleased to notice at Commencement exercises Drs. Ed. MacDonald, '79, Cuba City; Carl M. Beebe, Zumbrota, Minn.; T. C. Clark, '81, Stillwater, Minn.; and Frank Anthony, '81, Sterling, Ill. Dr. Anthony is Surgeon Major of the Sixth Illinois Regiment. We regret that a full list of those present cannot be given. But these few show that the alumni came

from great distances. There is an *esprit de corps* about Rush that is inspiring.

The *Bayard Weekly Herald*, of Iowa, in its issue of May 1, 1896, reports at length the marriage of Dr. W. L. Thompson, '94, to Miss Ella Kearns. We are pleased to see our graduates acting so promptly in accordance with the advice given in the CORPUSCLE symposium on marriage. We congratulate Dr. Thompson. That he has been successful in his choice of a life partner, and in his professional career the following quotation will show:

"The bride is a young lady who needs no introduction to Bayard people. For the period of her natural life a resident of this county, and for the past three years a prominent factor in Bayard's society circles, she is universally beloved and respected. Of charming manner and gracious mien, he is indeed fortunate who claims her as his bride.

The groom is a popular physician, who, during his two years residence here, has built up a large and successful practice. A favorite in business and society circles, endowed with more than ordinary ability, he has a bright future before him and is well worthy of his chosen life partner. *The Herald* joins with hosts of friends in wishing them a smooth journey on the matrimonial sea."

Dr. Frank R. Day, '95, writes from Honolulu that all is well, Dr. Day is one of the leading physicians of that city, holding an official position there.

We were glad to see Dr. C. D. Centre, '94, at Commencement. Dr. Centre is at Quincy, Illinois, and reports progress.

J. W. Faqua, '95, writes us from Urbana, Ill., that business is good and he is getting his share of it. We are glad to learn of the doctor's success.

Several members of the faculty are in Europe, some for pleasure, some for study. We have already learned of the departure of the following: Dr. Haines, to Norway, Sweden, France; Dr. Hyde, to International Dermatological Congress, London; Dr. Bridge, travel and hospitals; Dr. Dodson, Berlin and Vienna hospitals and laboratories; Dr. Hektoen, Paris and Sweden laboratories and original work; Dr. LeCount, Paris laboratories. Dr. Frank Montgomery has returned from Europe where he has been doing work in the clinics for dermatology.

The following letter of regret was received by Dr.

Rhodes, the Secretary of the Alumni Association. It seems of such interest as to merit publication:

DES MOINES, IA.

J. E. RHODES, Chicago, Ill.

Sir:—I should be pleased to be at your banquet, but must be content with my lot to remain at home this year. But should I be spared until '97 which will be forty years for me in the profession, then I hope to be with the Alumni. I shall continue to watch the interests of the *Old Rush* and am always glad to meet her patrons.

Hoping you may have a pleasant and profitable time, I remain, yours truly,

T. J. SHREVES, M. D., of the class of 1857.

REPORT OF THE NECROLOGIST.

Mr. President and members of the Alumni Ass'n of Rush Medical College:

The task, those of you present at the recent annual meetings have given me has been one of both pleasure and sadness. It is in truth a pleasure to read the kind words of commendation which I have received from friends and relatives of our deceased Alumni and it would indeed be a great pleasure, could I adequately portray in this brief report, the virtues and sterling qualities, and the noble characteristics of those whose faces were to be seen at the time of our last meeting but which we will never see again.

The appearance of obituary notices in the *CORPUSCLE* within a short time after the death of our members, has to a great measure lessened the duties of this office, and in fact, I believe the development of the association has now so progressed that the necessity for a necrologist has practically disappeared. From various sources I have learned of the death of at least thirteen of the Alumni of Rush College since our last meeting.

Dr. Z. Ball, of the class of '65, died at Waveland, Ind., March 23rd, 1895.

Dr. W. D. Morehouse, of the class of '66, died at Wawautosa, Wis., Jan. 17th, 1896.

Dr. A. W. Bosworth, of the class of '68 (?) died at Chicago. April 3rd, 1896.

Dr. Anderson of the class of '78 died at Polk City, Ia., (have thus far been unable to ascertain any particulars as to date etc.)

Dr. I. J. Bennett, of the class of '81, died at Lloyd, Wis., November 5th, 1895.

Dr. Victor E. Loughridge of the class of '88, died at Rensselaer, Ind., March 21, 1896.

Dr. Herman R. Wittwer, of the class of '88, died in Chicago, July 27th, 1895.

Dr. F. J. Jirka, of the class of '80, died in Chicago, July 9th, 1895.

Dr. J. H. Nettleton, of the class of '92, died at Brownville, Ore., October 9th, 1895.

Dr. Robt. P. Eckart, of the class of '92, died in Oak Park, Ill., August 28th, 1895:

Dr. E. H. Tinen of the class of '93, died in Chicago, Jan. 13th, 1896.

Dr. D. D. Bishop of the class of '93, died in Chicago, April 1st, 1896.

Dr. D. W. King of the class of '95, died at Swinton, Ill., August 22nd, 1895.

As notices, containing the information we have, concerning most of these deceased brothers have already appeared in the columns of the college paper, I will not dwell upon a repetition of that which has been published, but will add a few data concerning two deceased members which has just come to hand.

Dr. A. W. Bosworth, who was born in September 1843, and who died at Englewood in this city the third of last month, was a man who had prepared himself, both by study in this country and at the various learned centers of Europe, for a useful and distinguished career. His services during the Franco-Prussian war, as hospital surgeon, were recognized by the rulers of both Germany and Belgium, by the awarding to him of the black cross and other insigna. He began practice in Chicago just before the great fire and had enjoyed a lucrative business. He leaves a family of a widow and four children in very comfortable circumstances.

Dr. W. D. Morehouse, who died in Wawautosa, Jan. 17th, 1896, was a resident of Wisconsin for a number of years. He had been in active practice at Plymouth, Wis., and at Wawautosa most of the time since his graduation. Since 1885, when he was seriously ill, he had been compelled at times to give up his business. It appears that he had made special effort to keep up with the times by taking post-graduate work in Bellevue hospital, New York and Cook County hospital in this city.

Our informant states that "a more self-denying, conscientious and faithful physician never lived" which is surely sufficient evidence that our deceased brother fully appreciated the duties of his great calling and that he did not live in vain.

By noting the classes given you will observe that death has not been a respecter of ages, as the Alumnus of only last year has succumbed to the inevitable, as well as Dr. Ball who graduated from these halls in 1865. Between these two extremes there have been numerous deaths and in each instance I think we can truly say, untimely deaths. The men whose names I have read were representative practitioners or investigators in their respective localities.

The love and respect which has been given expression to, concerning the older members has certainly been equaled by the uniform expressions of sorrow for those whose life work was just beginning and whose prospects for future success were so promising. The fact that three of the most studious and brilliant members of the instructing corps of the college have succumbed to acute affections during this time, even in the hands of our most learned physicians, must impress us with the fact that as great as a physician is, his powers are always subservient to the laws of nature and the powers of the Almighty.

The enthusiasm with which our late friends Tinen, Bishop and Eckart entered into the study of our science, has probably never been exceeded and surely their efforts had been exceptionally successful. No trio of young men ever had a more promising outlook than these three and therefore it is that the faculty of this institution, as well as the various alumni who were favored by an intimate acquaintance with these individuals, acutely mourn their loss.

We are unfortunately not possessed of the data concerning all of our deceased brothers, nor have we been favored by the acquaintance of them, but I have no doubt, from the information which I have received that they lived the lives of truly honorable men and that the circle of friends which each have left, mourn their loss as those of us in Chicago have mourned the loss of those we knew so well.

For an extended account of the life work and characteristics of most of our individual deceased brothers, I would again refer you to the pages of the CORPUSCLE. May I not in closing, request that each member present make it a point of duty in the future to furnish the editor of the Alumni Department of the CORPUSCLE with data concerning any deceased Alumnus, of which he may learn, as soon as possible.

ALBERT I. BOUFFLEUR. Necrologist.

Chicago, May 26th, 1896.

The Corpuscle.

EDITORS,

J. E. LUCKEY, '97, Editor-in-Chief.

746 West Adams St., Chicago.

T. R. CROWDER, '97, Sec'y and Treas.

FRED. BARRETT, '97. E. L. McEWEN, '97. A. F. STEVENSON, '98.

Communications relative to advertisements and subscription (Subscription price \$1.00 per annum), should be addressed to the publisher. Remittances should be made by money order draft or registered letter payable to "THE CORPUSCLE," and addressed to Fred C. Honnold, 877 Jackson Boulevard.

RUBY RED AND BLACK: Colors of Lake Forest University. ORANGE: Color of Rush Medical College.

Dr. Klebs for RUSH is again to be congratulated upon securing Rush. to her Faculty a man whose name and fame is known throughout the world. Prof. Edwin Klebs, formerly of the Zurich University, has been secured to deliver during next year a course of lectures on General Pathology before the Senior class. As a pathologist Dr. Klebs is too well known to need introduction.

RUSH MEDICAL COLLEGE is bound to be the equal of the best in the world. With this in view she has been gradually increasing her requirements and facilities. With a faculty already the equal of any in America, she readily stands in the very front ranks.

Victory over *The Pulse* account is a thing of the past! Those in Debt. charge have maintained the good name of the class by cancelling all accounts against it. From the greatest creditors to the most humble freshmen, came cheerful responses to the call for aid.

Tuesday, May 12, a subscription paper was started and every person who subscribed seventy-five cents or more was given a *Pulse*. After a short time earnest effort was rewarded with success and when the class of '96 took their seats in the Central Music Hall, May 27, it was to be graduated as a class who had met their honest obligations, who were free from debt.

The subscription paper was headed by a purchase of ten copies by each member of the Board. The creditors were next

represented in their donations and finally the Faculty, alumni and students.

As a book of reference for all Rush men *The Pulse* by the class of '96 is hard to surpass. It is a book that the alumni and students will find very valuable. It is an honor to the Board-of-Editors under whose direction it was issued.

COMMUNICATION FROM DR. B. W. SIPPY.

The following letter received recently by Professor Haines will be read with pleasure by the many friends of Dr. Sippy:

IX NADLERGASSE 2, THUR 8,
VIENNA, AUSTRIA, March 9th, '96.

Dear Prof. Haines:—The very sad news of the death of our Dr. Tinen came to us recently and as yet we can scarcely realize that the robust young man who left us such a short time ago is really dead. He lived long enough to demonstrate that he was one of the very best and a brilliant future seemed assured him.

We are thoroughly enjoying our life in Vienna and are looking forward with great pleasure to a three or four weeks vacation trip in Italy during April.

Perhaps it will interest you to know what I have been doing. My work since the first of September has been that part of internal medicine relating chiefly to diagnosis and pathology and the advantages afforded one here for that work are even more satisfactory than I had anticipated. The system of ward courses limited to six men, peculiar to Vienna, brings one in actual contact with patients, who submit cheerfully, as a rule, to repeated examinations. After we have made our diagnosis, the assistant demonstrates the case. The great stimulus to use accurate methods given by the invariable post mortem has in the course of years developed a greater degree of

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perfection in diagnosis than I had thought possible. The cases that do come to a post-mortem correspond so accurately to the assistant's demonstration that we feel we have practically a P. M. on every case we study. Splendid side courses on microscopy of the blood, secretions and excretions, ophthalmoscopy and such aids to diagnosis tend to broaden one's foundation and I am delighted with the work.

We expect to reach Chicago in November and I realize that I am becoming more and more anxious as that time approaches.

* * * * *

I sincerely hope you have been well this winter.

Yours very respectfully,
BERTRAM W. SIPPY.

LOCATIONS.

For Sale—Terms to suit—A well established practice in the heart of the best farming country in Illinois. Together with a good dwelling home and barn and two lots. Failing health necessitates moving to a different climate. Address T. C. MURPHY, Manito, Ill., or Dr. JAMES H. ETHERIDGE; Chicago.

Dr. F. W. Moffit, 4,257 Cottage Grove Ave., Chicago, has an office practice to dispose of.

By communicating with Dr. J. W. Smith, of Belmont, Wis., a good physician can get information regarding a good location in a Wisconsin town of 500 inhabitants without any opposition.

Address Jas. A. Lyons, M. D., for information regarding the sale of a good practice at Bear Creek, Wis. It is in a well-to-do farming community of mixed nationality.

Belcher Hyde, M. D., of Brooklyn, N. Y., writes: "Antikamnia is an American product, and conspicuous on this account and because of the immense popularity which it has achieved. The literature is voluminous, and clinical reports from prominent medical men with society proceedings and editorial references, attest its value in actual practice in an endless variety of diseases and symptomatic affections. The fact stands incontrovertible that antikamnia has proven an excellent and reliable remedy, and when a physician is satisfied with the effects achieved he usually holds fast to the product. Antikamnia is one of the certainties of medicine. This is the secret and mainspring of its success."

The Corpuscle.

RUSH MEDICAL COLLEGE, CHICAGO, ILL.

MEDICAL DEPARTMENT LAKE FOREST UNIVERSITY.

VOL. V.

AUGUST, 1896.

NO. 12.

TUBERCULOSIS OF BONES AND JOINTS.

BY EDMUND F. BURTON.

(Awarded the L. C. P. Freer Second Prize for 1896.)

HISTOLOGY OF TUBERCLE.

Conflicting testimony and opinions in regard to the histological identity of milary tubercles and other nodular products of very local inflammations have made somewhat doubtful the description of their microscopical structure and until the identification of the bacillus rendered the diagnosis of tuberculosis exceedingly uncertain. Even at the present day there is still some question as to whether or not there are anatomical characteristics which distinguish the nodules of tuberculosis from all others of inflammatory origin. Baumgarten claimed to have produced typical tubercles in a rabbit's cornea by sticking fine hairs into it. An arrangement of cells exactly similar to that in true tubercle is said to exist in actinomycosis in animals. Senn believes that the distinguishing anatomical character of a tuberculous nodule consists in the arrangement of the constituent parts, and not in the presence of any particular element. Giant cells exist in many non-tubercular processes, although the peculiar grouping of the nuclei there present, forming an irregular ring near the periphery of the cell, is not usually seen elsewhere. Without attempting to review in detail the varying testimony, the weight of evidence seems to be that there are certain anatomical characteristics by which true tubercle can be identified. Of these a brief description will be given.

A tubercle large enough to be visible to the naked eye is

found, upon microscopical examination, to be formed by the grouping of a greater or less number of minute tubercles—of which the central ones have become caseous—each of which is made up of certain elements, some of which, at least, are constantly present. Such an individual tubercle may be described as a microscopic, gray or yellow, translucent, non-vascular district, oval or round, consisting of a central and an outer portion, which differ essentially from each other. The outer portion is composed, sometimes wholly and sometimes only in part, of leucocytes, or their nuclei. These cells form a wall of varying thickness about the central part. The wall may be, in some cases, largely fibrous, with but few leucocytes. According to Cheyne, in these cases the tubercles are formed in the interior of blood-vessels, the fibrous wall being the remains of the vessel wall. The central portion is made up of three varieties of cells, viz., giant, epithelioid and lymphoid.

Giant cells are not always present, and are not distinctly characteristic of this disease, since they are also found in syphilitic growths and in many tumors. This is disputed by Cheyne, who believes that the giant cells that have been claimed to be found in other than tubercular tissue have, in reality, been tuberculous cells, and that the loci where they were found were strumous ulcers or sinuses in which there had been chronic abscesses. When found, they are few in number, ordinarily not more than one in each tubercle. Their number seems to be in inverse ratio to the number and virulence of the bacilli. In joint tuberculosis, where the number of bacilli present is ordinarily not large, there are to be found an unusually high number of giant cells. They are large, irregularly outlined, and multi-nuclear, the nuclei arranged about the periphery of the cell, as stated above. Their origin and method of growth is uncertain. By some investigators, as Metchnikoff, they are thought to be accumulations of phagocytes. Others, Baumgarten and Koch, believe that they are solitary leucocytes whose nuclei have yielded to the hyperplastic influence of the bacilli, but which have failed at the final stage of cell division. Still another class of pathologists describe them as derived from fixed tissue cells by hypertrophy or coalescence. The last is perhaps the more generally accepted theory.

Epithelioid cells, first described by Rindfleisch, and considered by Cheyne to be the characteristic element of the lesions of tuberculosis, are believed to be constantly present in tuberculous tissue. Villemin from experiments of inoculation

of animals with the cheesy debris of tubercular tracts, concluded that this debris was endowed with the properties of a virus capable of causing the growth of tubercles by irritating certain elements of the tissue. Similar experiments led Klebs, Cohnheim and Rindfleisch to the same conclusion. These certain elements were believed by Rindfleisch to be endothelial cells. He says: "Irritation of the endothelia of the lymphatics, serous membranes and blood-vessels is the essential factor in the production of miliary tubercles."

Ziegler says that the combination of the formation of giant cells with the aggregation of epithelioid cells in nodular foci is always a sure diagnostic criterion of tuberculosis. According to Baumgarten, these are the only cells in tubercular tissue in which karyokinetic changes occur. He therefore calls them the embryonal cells. His theory of their origin is the generally accepted one. His experiments of the introduction of a pure culture of bacilli tuberculosis into the anterior chamber of the eyes of albino rabbits, show that the epithelioid cell is the result of proliferation of endothelial and epithelial cells, following karyokinetic changes in the nuclei, brought about by the presence of bacilli. Cheyne claims to have demonstrated their direct development from the endothelial cells of blood-vessels.

Lymphoid cells are small polynuclear leucocytes. They commonly lie in a zone beyond the cells described above, and form the indefinite boundary wall of the tubercle. They are present in numbers varying according to the rapidity with which the nodule has been formed, slow growth favoring the production of a small-celled focus. Even where the cell reproduction has been excessive, resulting in the formation originally of a large-celled tubercle, the later abundant migration of leucocytes may result in their completely hiding the larger cells. The presence of these leucocytes is cited by Senn as a positive proof of the inflammatory nature of the disease, inasmuch as their migration can occur only through capillary walls whose cement substance has undergone alteration by inflammation. The demonstration of fibrin in tubercle by Falk is a further proof of their inflammatory character.

There is also described by most writers, as one of the elements of tubercular nodules, a reticulum, in whose meshes appear to lie the cellular elements above described. This network is said by some to be the remnant of the connective tissue stroma of the part, pushed aside and partly obliterated by the abnormally rapid proliferation of cells. Another class of ob-

servers see in the reticulum numerous anastomosing processes of giant cells. Cheyne believes that its appearance is due, either to the processes from giant cells together with bands of fibrous tissue in connection with the tubercle wall, or to diffraction appearances due to bad illumination of specimens

In regard to the identity of the infective agent in tubercular processes all discussion has been ended by the discoveries of Robert Koch.

By proper staining methods microscopic examination shows, in many cases, the presence of the bacilli in the cells. They are seen to be confined principally to the giant and epithelioid cells, with a small number scattered in the intercellular spaces. In the giant cells the bacilli lie radially among the peripheral nuclei. In epithelioid cells they are most numerous in or near the nuclei. It is not always possible, however, to demonstrate, by histologic methods, their presence in tuberculous tissue, especially in bones and joints and lupus. Investigation made to this end, in disease of these parts, has been reported, among others, by Koch (in his first work on tuberculosis), by König, Schuchardt, Krause, Bouilly, Mögling, Kanzler, Schlengtendal, and Müller. Bacilli have been found in most cases. It is thought that the failure to discover them in every instance is due to some change in their structure or composition, whereby our present methods of staining are rendered ineffective, since both cultivation and inoculation experiments have produced positive results where, with the most persistent search, the microscope has failed to reveal their presence. Ordinarily an area of tuberculous tissue presents numerous isolated lesions, and it is from this condition that the disease derives its name. Such is not, however, invariably the case. There is a condition of tubercular infiltration in which the tissue is the seat of essentially tubercular processes, but where the epithelioid and giant cells are not found in groups, but appear scattered irregularly among the other elements of the tissue or run in broad bands through it. This may occur near or surrounding an area containing typical tubercles, or the lesion may be that known as infiltrating tuberculosis of Laennec, caused by the great number of the bacilli. The tissue, which is the chief seat of this infiltration, presents two principal types, granulation tissue and young fibrous tissue. It is very commonly found in bone and joint disease.

LIFE HISTORY OF TUBERCLE.

By whatever route the bacillus reaches a part, as soon as it is arrested in its course there is set up a local irritation in

the nuclei of the fixed elements of the tissue, exciting karyokinetic changes, which result in their proliferation, with the consequent production of epithelioid and giant cells. An inflammatory process follows, resulting in the immigration of leucocytes, the extent of whose phagocytic action is not settled. Metschnikoff believes that the bacilli, if comparatively few in number, may be entirely destroyed by the leucocytes. Baumgarten and others deny any such action. In case the disease is not thus arrested, there is formed, by the process just described, a minute tubercle, which may, by union with many others of its own kind and subsequent degeneration, form a miliary naked-eye tubercle. Numerous tubercles of this description are formed, either by the invasion of the part by a large number of bacilli, or, as in the larger number of cases, in all probability, by peripheral extension from a single original focus. The process of coagulation necrosis which followed immediately the formation of the original minute tubercle now progresses more rapidly, extending from the central part toward the periphery of the nodules. They now lose their gray, translucent appearance, and become opaque, yellow, or yellowish-white. The cause of this process of caseation is not entirely understood. It differs from ordinary fatty degeneration caused by deficient blood supply, and is attributed to the direct action of the bacilli or their ptomaines.

Prudden and Hodenpyl, by the injection of dead tubercle bacilli, produced lesions resembling in every respect except caseation those produced by live bacilli. Even this exception was not found by Straus, who, by similar experiments, produced in animals lesions which were entirely identical with those of tuberculosis. He inoculated eighteen rabbits, eight guinea pigs and one dog with cultures of human tuberculosis which had been subjected to a heat of from 100° to 130° C. for from five minutes to several hours. Death followed invariably in from six to forty-four days. These results seem to point to the ptomaines in the bodies of the bacilli as the exciting cause of the disease.

The softened mass may next pass through various changes. When the granulation tissue undergoes caseation there is formed about the caseating tubercle a fibrous capsule which limits its further extension. Should this be the only infected focus, there will thus be prevented the further progress of the disease until through trauma or other influences, regional invasion becomes again possible.

Following encapsulation, calcification may occur by the de-

posit of salts. It is also possible for the locus to become entirely permeated with granulation tissue which cicatrizes throughout, the caseous material disappearing and the cicatricial tissue undergoing hyaline degeneration. The less favorable process following caseation is that of softening, the cheesy mass becoming confluent, containing curdy particles of broken-down cells and called by some authors pathological milk, by others tubercular pus. It differs from ordinary pus in being thinner and whiter. The presence of bacilli in this fluid may be very hard to demonstrate, and still the disease will be produced by inoculation with the material. This fact, together with the other, that the freed contents of an encapsulated tubercle will produce infection after the lapse of years even, seems to indicate the presence of spores which may retain their vitality for an indefinite period. This point is, however, still unsettled. Infection of neighboring tissue is of course inevitable under the circumstances. Metastasis may occur, small particles being carried by the blood or lymph to distant portions of the body, becoming tuberculous emboli and setting up new foci of infection. The walls of the cavity left after the discharge of this pus are lined by granulation tissue, containing yellow particles and are highly infectious. It can be easily detached from the surrounding tissue by scraping with a sharp spoon.

Such is the life history of the lesion to which the term tubercle is applied. The successive formation, development and death of similar nodules makes up the story of the disease in the body.

TUBERCULOSIS OF BONES.

The variety of names given in the past to the conditions which we now describe as tuberculosis of bones and joints indicates fairly well the uncertainty and diversity of opinion which existed in regard to their true nature, although it is said by König to be the most common joint disease with which the surgeon has to deal. It is, however, less than fifty years since Ried said that tubercular caries of bone was a very rare condition, and strongly advised against operative treatment. The name white swelling was used in 1676 by Wiseman, who drew "the first accurate clinical picture of a tubercular joint." He included under this term all chronic inflammations and enlargements of joints, and ascribed them all to scrofulous origin. The first to assert the tubercular origin of these joint lesions were Volkmann and König, although their claims were not en-

tirely allowed until after the discovery of the tubercle bacillus by Koch, in 1882.

The histological condition produced by tubercular infection in bone differs considerably from that resulting in the joint cavity, and the two are not necessarily coexistent. Still it is not through an arbitrary grouping that we consider them together, since in a large majority of cases both parts are involved when the aid of the surgeon is sought.

In regard to precedence of infection in a tuberculous joint, where both the bones and membranes of the joint are diseased, the primary lesion may have occurred in either part. Such a lesion probably never exists, however, as a primary infection in the body, but is secondary to an older focus in some other organ and caused by embolic infection wherein the bacillus itself, or a bit of tubercular tissue containing bacilli, brought by the blood stream, is deposited in the capillaries of an Haversian canal. Infection may occur through trauma, wherein the bacilli enter through a lesion of the skin.

As the result of invasion, a variety of changes may be produced, of which the following are the most commonly met with.

1. Miliary tuberculosis. This form is found in bone only when there is general miliary tuberculosis or old foci present in the body. The appearance of the tuberculous area does not differ from that occurring elsewhere. Billroth says: "In rare cases true miliary tubercles appear, small, at first gray, nodules, which afterward undergo caseation, in the spongy substance of the epiphyses, in the tarsal bones and in the bodies of the vertebrae. A diagnosis of this form of true tuberculosis in bone can seldom be made during life, and may at most be suspected when pronounced tuberculosis of the lungs or larynx exists." The condition is not of surgical interest, being only part of a fatal general disease.

2. Caseous degeneration of the inflammatory new growth. Here we find a soft mass of broken down tuberculous product ordinarily enclosing or surrounding sequestra, which may be few and of considerable size, or in great numbers and so small as to be only discovered by friction between the fingers. In the latter case they are unabsorbed spiculæ of bone from the detached and degenerated trabeculæ, and indicate that the progress of the disease has been comparatively rapid. In the cancellous tissue surrounding the cavity, the trabeculæ will be seen to be thickened and of a yellowish color. Strongly developing granulation may completely remove the sequestra, if

the process of caseous degeneration is not too rapid; but decaying or degenerating granulations have no power of absorbing bone. The granulating tissue must be living and in contact with the sequestra.

The etiology of these sequestra is not altogether beyond question. They occur, most frequently, close to the articular ends of bones, and are irregularly wedge-shaped, their bases directed toward the joint. They sometimes lie immediately below the cartilage, which may be destroyed above them, allowing them, where entirely detached, to enter the cavity of the joint. Although the word sequestrum means a separated part, the name is applied when the portion of bone indicated is not yet wholly deprived of life, but is still traversed by vessels and united with the neighboring tissues by vascular granulations.

Their shape and position support the theory of König that they are bone infarcts, caused by emboli of tubercular material blocking the end arteries of the region, and producing the death of the part of bone supplied by them. The results of Müller's experiments upon animals seem, also, to indicate the correctness of their views. Tillmanns also calls them infarcts. Cheyne repudiates this theory, on the ground that there is evidence of the dead portion of bone having been the seat of active growth, which, he says, is a fact quite irreconcilable with the embolic theory.

The wall of the cavity may be osteoporotic and infiltrated with tubercles, or the inflammatory process may be abated and a third condition inaugurated, viz.:

3. Condensing osteitis or sclerosis. Healing is here in progress. The sequestra and surrounding mass of tubercular tissue are being walled in and the course of the disease is arrested temporarily, so far as this locus is concerned. Succeeding infiltration with calcareous salts, or indeed, in some cases, complete disappearance of the tubercular material, may bring about the most favorable outcome. In pronounced cases the structure becomes as dense as ivory—so-called eburnatis ossis—and the medullary cavity may be completely obliterated. This, however, is not the rule.

4. Following coagulation necrosis and caseation, liquefaction or softening may occur, with infection and breaking down of adjacent tissue. The tubercular pus then forms for itself a canal or sinus, which may take either one of two directions.

First—It may burrow under the articular cartilage and escape into the joint, when a panarthrititis is begun, causing thickening of the capsule and synovial membrane, infiltration of the

peri-articular tissues and erosions of the articular surfaces. It will thus be seen that the danger to the joint begins with the softening of the cheesy masses in the bone adjacent thereto.

Second—The sinus may run more or less directly outward, perforating the periosteum beyond the insertion of the capsular ligament and thence, through the soft parts to the surface, thus allowing the joint to escape infection.

In the former case, by the destruction of the deeper parts of the cartilage by the ingrowth of the new tissue, it may become detached piecemeal from the bone and its articular surface may suffer erosion from the fluid now contained in the joint cavity. The cartilage loses its clear bluish color and becomes yellowish and opaque or somewhat vascular.

5. Tubercular periostitis occurs most frequently as a primary affection of the ribs and vertebrae; also of the bones of the face and cranium. It will be found most often in badly nourished persons, particularly in children suffering from the so-called scrofulous diathesis. The disease makes its way along the periosteum, involving more or less of the bone, honey combing its surface, sometimes deeply enough to cause pathological fracture. In the case of long bones where there has been perforation, a periosteal abscess forms, involving also the connective tissues, and the overlying skin may present the appearance of lupus.

6. Caries sicca is a form of tuberculosis of joints whose characteristic feature is the absence of suppuration. There is sclerosis of the articular end of the bone and obliteration of the cavity of the joint. It promises more favorable results without surgical interference than any other form of the disease. It occurs most often in the shoulder joint.

7. An acute progressive tubercular osteomyelitis is described by Kiener and Poulet, which rapidly extends through the spongy portion of the bone, producing numerous sequestra and large irregular areas of yellowish-white infiltration, threatening life by its rapid induction of the general disease. Infiltration extends from the epiphyses along Haversian canals to the medullary cavity and periosteum. Timely and radical operative interference is required in this condition.

Bones and joints most often affected.—The following table is given by Cheyne, showing the bones and joints most frequently the seat of tubercular disease, and their relative liability to attack.

Spine	23.2	Per cent.
Knee joint.....	16.5	"
Hip joint.....	14.6	"
Tarsus and ankle joint.....	14.4	"
Elbow joint.....	6.3	"
Wrist and hand	6.0	"
Skull and face.....	5.5	"
Sternum, clavicle and ribs.....	5.2	"
Pelvis.....	3.5	"
Femur, tibia and fibula.....	3.5	"
Shoulder	1.5	"

Scapula, ulna and radius.....	1.0	“
Humerus	.08	“
Patella.....	.01	“

This is made up from figures of Jappe, Schmalfuss, Billroth, Menzel, and 602 cases of Cheyne.

In general the favorite points of attack are the spongy bones and the extremities of long bones. There are two conditions which favor the location in bone: First—The presence of end arteries in which the occurrence of emboli is easily accounted for. Second—The fact of the slowed circulation of blood in such parts.

The lesion occurs as a primary one most commonly in young persons, because the foreign elements circulating in the blood are more readily deposited in the branches of the vessels in growing bone. In older persons the primary infection will more probably be in the synovial membrane.

In the case of the vertebrae, the disease is located, in most instances, in the mid-dorsal region; more rarely in the lower cervical or lumbar regions. The transverse, articular or spinous processes are rarely affected secondarily, their structure of hard bone protecting them from invasion, and it is said that primary infection in these localities never occurs, so far as is known. Dr. Roberts, of Philadelphia, reported a case, however, of tuberculosis of the mid-dorsal region, in which there was primary infection of the laminae of the vertebrae, and in which the bodies were not attacked.

Rindfleisch points out the fact that the intervertebral discs either escape entirely or are affected only at a late stage, and argues from this that the disease is not primarily an inflammation of the joints.

In the long bones the tubercular process commences as an affection of the spongy tissue of the epiphysis, most often near its line of junction with the shaft, sometimes near the articular cartilage, and rarely in the periosteum. The inflammation is nearly always set up primarily in the red medullary tissue of the cancellous structure of the extremities. It appears generally as a localized disease in one or more foci—the encysted tubercle of Nélaton—rarely as a simultaneous infiltration of the whole epiphysis—the infiltrated tubercle of Nélaton. The two epiphyses of the same joint are sometimes affected at the same time, and independently.

Tubercular disease in the shaft of a long bone is rare, and when met with, a mistaken diagnosis of syphilis or some other bone disease is liable to be made. An exception to this rule is furnished by the phalanges of the hands and feet, common seats for the lesion, which, in these situations, is called *spina ventosa*, a diffuse central tubercular osteomyelitis, in which the spindle-shaped enlargement of the shaft of the bone is the most characteristic feature.

In the flat bones tubercular lesions have a tendency to extend upon the surface and perforate. This is frequently shown in the iliac bone and also in the cranium.

(Continued.)

HISTORY OF THE CLASS OF '96.

BY EDWARD A. MILLER, B. S., M. D.

Mr. President, Members of the Faculty, classmates and friends: It has fallen to my lot to deliver a so-called history of the graduating class of '96.

This collection of facts and otherwise, very naturally begins with the opening of the halls of grand "Old Rush" in September, 1893, when we as prospective D. J.'s entered her halls, shunned the elevator and climbed the stairs. We were truly gathered from the four corners of the earth, there being representatives from the burning desert of Persia in the East to the evergreen coast of Oregon in the West; and from the tropical regions of the South to ice-bound Canada in the North.

We presented a motley appearance, varying from dark to light, from rougish boyhood to grave, bald-headed sedateness, and our boldness ranged from the men with their pomp and A. M. degrees to those who clutched their high school diplomas and trembled lest the great phantom judge should look down from his seat and say "Depart ye for the Rush Faculty never knew you."

The first thing to interest us, and our pocket books of course, was the office window, here we made the acquaintance of our genial clerk, Mr. Frank Gould, and a very close friend he has been to us, and true to his faith, his rule with us has been the same as with all preceding classes "It is better to receive than give."

Once having obtained a matriculation and general ticket which entitled us to the privilege of being lectured to sleep, quizzed and "flunked," we soon assimilated ourselves enough to decide that a class organization would be of benefit to the class as a whole, consequently a meeting was called, a committee appointed to formulate a constitution and later the following list of officers were chosen.

E. M. Eckard, President.

G. T. Carson, C. W. Cox, Vice-Presidents.

H. C. Gemmel, Recording Secretary.

J. H. Dunnaway, Corresponding Secretary.

U. S. Lewis, Treasurer.

J. A. Harvey, Historian.

Many and varied were our experiences both in and out of

colleged during the year of "D. J. ism". At first there was a faint hearted feeling and many were the cold chills which rippled down our spinal columns as the quiz masters in anatomy would call for eleven points of interest on the inferior part of the petrous portion of the temporal bone. Such questions caused some of us to wish and hope that when man had turned one more round on his ladder of evolution that at least ten of these points will have been obliterated. But with time came courage, determination, strength and success.

As to our environments out of college, well—we were not Demosthenes in a cave, nor Diogenes in a tub, but some of us were truly Goldsmiths in a garret, and many were the fierce and long-continued battles that were fought in these narrow quarters. But the fiercest battles were fought on Wood and Congress streets, not with studies, but with that terrible foe *Cimex Lectularius* as experienced by Balance, Leckrone, Stalker and others and gained for these streets the title of "*Cimex Lectularius* row."

Other battles were fought in the students' restaurants and they left their mark. Look at our faces and see the indelible signs of a Carlyle's bad stomach, caused by eating horse meat, drinking chicory, picking stomoxydæ out of the apple sauce and removing papillary appendages from the hash.

We not only won distinction as chemists and *materia medica* students during our year of "D.J. ism" (see Harveys's History of '94) but some of our members gained reputations as diagnosticians, as evinced by Hemingway in Gynecology, and Weiskopf and Wallace in Surgery. Early in the spring of '94 we had an endemic of baseball fever, in the treatment of which, several of our class won considerable fame and firmly established a name for the Rush team. The rest of the class was right loyal and patriotic during this year, but the complications and sequelæ were very exciting and severe, as evinced by "Shorty" Tope scaling the grand stand at Evanston. But this was mild as compared with serenading the professors riding in the blue wagon and playing checkers with your nose as experienced by others.

Such experiences tended to destroy class patriotism, so that now the team goeth its way alone and weeping.

During this year the Faculty paid some of our boys a very high compliment for enforcing order, gave them a reception at their homes and granted them a two weeks' vacation; for further particulars enquire of Frost, Schreiter, Schram and others.

It was late in this year that politics took a firm hold on us,

and the password was clique or anti-clique, and after a long siege of wire pulling and nominating speeches, in the latter of which our present valedictorian snuffed his candle and drew it from under the bushel, the following supposed anti-clique board was chosen to publish our college annual, viz: Messrs. Duncan, Bullen, Martin, Carson, Hobbs, Witte, McNary and Larned.

At last May with all its beauty and glory was upon us, and after a short but trying siege of examinations we were free, not only for a vacation of four months, but free from the stigma of "D. J. ism."

In October we again assembled ourselves and found our first duty to be the selection of a new list of anchorages for our striving members to cling to; accordingly the following officers were chosen:

S. A. Edmands; President.

S. D. Beebe, H. W. Culbertson, Vice-Presidents.

F. A. Guthrie, Recording Secretary.

C. L. Hobbs, Corresponding Secretary.

F. N. Brett, Treasurer.

W. F. Brode, Chaplain.

F. G. Connell, Historian.

M. D. Bates, Sergeant-at-arms.

So soon as we were fairly settled, athletics seized us again and a football team was organized, and after receiving a goodly number of broken noses, twisted knees, sprained ankles and discolored eyes, they finally summed up four games to their credit. Ask "Fully" how many they lost if you want to hear the faint rippling of a far-away oath.

There were a few characteristics that marked us as members of the middle class and they were the same as those of all preceding classes, viz: a gradual shrinkage of conceit, a lessening of bluffing, more hard "boning", and consequently less "ponying." We were beginning to learn that medicine was a progressive science and as yet we had received but partial light.

It was during this time that Sister Kittie (i. e. Dr. Crowley) found that he was not accustomed to the atmosphere of the quiz room and begged to be excused until he could get his breath or "pony," we have never fully decided which.

Some of our boys were original investigators in anatomy, the following are a few of their scientific discoveries. Bird found the cornea to be an opaque, transparent, clear membrane; Eckard found indented teeth in a new born infant. Among the anomalies were Greer's covering for the ventricles of the

Corpus Callosum and Convery's location of the inferior longitudinal sinus. But the saddest event was when the circle of Willis escaped from Tope's head.

With spring's return baseball again took the field. It was during the first game that the class lost all patriotism and loyalty, the sequelæ were too severe. Discolored eyelids were kept on tap, and could be had for the asking. Pegram received a broken nose, Montgomery in attempting to play the part of the Great Pacificator got his golden locks entangled in several hands, and as he emerged from the crowd like a meteor from the heavens, the machinery in his head gave one more turn and he was heard to faintly murmur "Where am I at?" The next day the boys gently sang "We'll never go there any more."

May soon dawned on us again and with it two weeks of examinations. We struggled bravely through all without a tremor except Prof. Hamilton's and that was a terrible shock surgically speaking, so much so that some of our boys never fully recovered from it until this year.

At last we were seniors and in the midst of the year of pleasure and interest, sprinkled with plenty of hard work. Again we were called upon to secure new anchorages and the following list of officers were chosen:

William Lucius Palmer, President.

William Aldovard Metzger, 1st Vice-President.

George Henry Vaupel, Ph. G., 2d Vice-President.

Daniel Adam Orth, Recording Secretary.

Thomas Walter Gillespie, Corresponding Secretary.

Neal Walter Culbertson, B. S., Treasurer.

Sumner Arthur Edmands, Valedictorian.

Edward A. Miller, B. S., Historian.

Thomas Francis Conroy, A. M., Poet.

Eduard Johann Witt, Chaplain.

Henry Abram Berry, B. S., Essayist.

Spencer DeWitt Beebe, Ph. G., Chorister.

Walter Earl Richardson, Sergeant at Arms.

Executive Committee: Henry Slaymaker Smith, B. S., Chairman.

Lewis Jefferson Daniels, Walter Guy Law, Tolbert Fanning Hill, Robert Cooper Fullenweider.

During our last year's work many things which had heretofore been purely abstract learning had entered the concrete ist and our knowledge of practical medicine has been broad-

ened and the value of our theoretical training which received in the previous years is now fully appreciated.

We have a goodly number of brilliant diagnosticians and the work of the class as a whole has been justly complimented by the several members of the faculty.

As further evidence of worthiness the returns of internships from the long list of competitive examinations in the different hospitals show that we have secured a representative in each and every one and special honor is due the three who received appointments in the Cook County Hospital, viz: Messrs. H. A. Brennecke, F. W. Bullen and W. L. Brown.

Of course some of our members in their enthusiastic work left open the entrance to the port of "Grinds," consequently the following: Eddleman found a new growth in a patient's abdomen which was later, happily without an operation, found to be the border of the rectus abdominis muscle; Rolletau was opposed to probing a fistulous opening in a case of osteomyelitis for fear of breaking the probe, and Eckard felt a tuberculous rale.

It was during the holidays that Dredge of hard-boiled egg fame, attended a homeopathic lecture, and was presumably hypnotized or intoxicated by the one millionth of a grain of quinine, for in the encounter he lost his watch and spare change; he declares that if he ever gets into trouble again that he will call to his assistance Peter Jackson, alias "Berry" who defeated one of our noted professors in the first round, and later attempted to bunt an electric car off the track. He was slightly disfigured in the latter conflict, but after a week's study of homeopathy in the Cook County Hospital, he bobbed up as serenely as ever.

Our college annual as a book was conceded to be of special merit, but financially—well! "Let that rest in peace." But enough of grinds, and I hope that none will feel slighted for not having been mentioned, for had I space and time, every one might be found presenting a peculiar figure in the rounds of the kinetoscope. For Shakespeare has said, "Use every man after his desert and who shall escape a grinding." And if any feel offended at anything in these pages, please remember that 'tis those we love best, who are first in our thoughts; and Ingersoll has said that "Every human being is a necessary product of conditions, and every one is born with defects, for which he cannot be held responsible. Nature seems to care nothing for the individual, nothing for the species. Life pursuing life and in its turn pursued by death, presses to the

snow line of the possible, and every form of life, of instinct, thought and action is fixed and determined by conditions, by countless antecedent and coexistent facts."

Midst pleasure and toil are always found the dark lines of grief. So has it been with us, twice have we been called to mourn the death of one of our classmates, twice has the dark hand of fate descended in our midst, with the scythe of time, and clipped the bloom from the cheeks of our beloved classmates. In the midst of life we are in death, in the midst of success we are but failures. So was it with our beloved classmates C. W. Cox and D. P. Hauser. And as we stand in awe watching the wheels of time roll swiftly by we can but think

"How brittle is the thread that binds
The spirit to the mortal frame,
It breaks so easy, and the dust
Returns to dust, from whence it came.

"But yesterday it seems the forms of two
Endowed with manhood's fullest bloom
Were marching firm on life's highway,
To-day their dust rests in the tombs.

"Though hearts be saddened, hopes be crushed
And sorrow like a river run,
We must meekly bow and say
O Lord of hosts, thy will be done."

And now kind classmates our struggle is over, we have fought our battles shoulder to shoulder during our years of college life. Our next great battle will be with the world, and though it be fierce and long, or short and easily won, let our motto ever be "Humani Nihil Alienum." And let us strive to live such a life that should some of us be called to that undiscovered country from whose bourne no traveler ever returns, before we meet again, it may be deservingly inscribed on our records "He loved his fellow man."

Kind friends and members of the faculty to you I say fare well. To you classmates the same sad word must be spoken, but should our lines of battle ever cross in this broad world let us meet as brothers and friends. Farewell.

“RENDER UNTO CÆSAR THE THINGS THAT ARE
CÆSAR’S.”

ESSAY BY HENRY A. BERRY, B. S., M.D., READ AT CLASS DAY
EXERCISES, MONDAY, MAY 25, 1896.

There is no geography in medical science and no sectionalism in the healing art. It is the exclusive property of no time, place or people. From history and tradition we learn that among the professions medicine has held an important place in the history of the world in all the ages past. It stands today unrivaled in advance of every other profession for benevolence, charity and patriotism.

Countless sanitary and other reforms for the prevention of disease have been instituted by members of the profession, thus staying the hand of disease from which the physician receives his support. Imperishable monuments as enduring as time are everywhere seen proclaiming his charity. Magnificent hospitals, homes for the aged, asylums, infirmaries, houses of mercy and invalid retreats have been erected all over this land by members of the medical profession. The true physician is an angel of mercy not only during the raging epidemics, but at times when the destroyer is less intent upon his dreadful work.

Most communities are willing to acknowledge the value of a good physician in times of great mortality. His coming is looked for with much impatience and on his arrival every look and action and every word he speaks is studied with absorbing interest. If his countenance indicates cheerfulness and animation his patients are inclined to feel hopeful and encouraged, but a contrary mien causes expectation to sink and hope to be turned into despair. But there have been times and places when the value of his services were not readily recognized. Some one has said:

“Three faces wears the doctor;
When first sought an angel’s,
And a god’s the cure half wrought;
But when that cure complete, he seeks his fee,
The Devil looks less terrible than he.”

His services are often undervalued because of his charity

and self-sacrifice. The community's sense of appreciation is often obtunded by circumstances of a more spectacular character.

When Mr. Merritt, the pedestrian, came out second best in the contest for the championship of the state of New York, he received more notice and praise from the citizens of Bridgeport, his home town, than was ever bestowed upon their most self-sacrificing doctor. The mayor, three ex-mayors, half a dozen judges and a general assured him by wire that he had maintained the reputation of the city and country and promised him that Bridgeport would stand by him. The New York Tribune very pertinently said: "It is safe to say that none of these people would ever have thought of sending a special telegram to a brave doctor who was risking his life to fight the yellow fever."

A few instances from real life will prove the statement that the true physician is an unselfish patriot. In 1832 the city of New York was visited by an epidemic of cholera, which swept away thousands of the inhabitants. Out of a list of five hundred physicians in the city at that time, three only were known to have left from motives of personal safety, and among eighty medical students not one of them left. Against the earnest protest of friends and at the peril of their lives, some of the most distinguished men in the profession made careful post mortem examinations of the cholera victims. They said: "The pathology of this disease must be studied and understood in order to be treated successfully, and if they succeeded in contributing such knowledge to the profession, even at the cost of their lives, those lives would be a holocaust in a noble cause."

A cholera epidemic of unusual violence began in Sandusky, Ohio, in 1848. The mayor wrote saying: "It is impossible to describe the desolation that withers the stoutest hearts. The physicians are worn out with toil and exhausted with care for the sick, while it is almost impossible to procure nurses for the suffering and burial for the dead." In a short time he wrote again saying: "The havoc is awful, and our remaining physicians (several have died) are battling with heroic fortitude, hurrying from place to place, unable to give more than a few moment's attention to each sufferer, while a greater number are doomed to die without a physician or nurse." On that sad day the plague-stricken city cried aloud for help, and their cry reached the ears of those on whom the sufferer never calls

in vain. With what alacrity did the profession respond? In a single day help arrived, and in two days six physicians who had fallen in the struggle were replaced by twenty-four, and five medical students from different and distant parts of the country. One impulse moved them, one courage sustained them and they spoke the heart of the whole profession. Through their untiring energies the plague was staid. Though exposed to the most severe ordeals through which men were ever called upon to pass, they refused all remuneration, and the Sandusky citizen thanked his God that his lot in life had been cast to him where Christian charity prevails.

In the recent epidemics in the South of the yellow fever, what a sacrifice was made from the ranks of the medical profession, more especially by those who went from the North. It was almost certain death to go, but when the call was made for help, like an unselfish patriot many a conscientious doctor could see his duty above and beyond his own selfish nature, and with his life in his hands, started on his mission of mercy, in many instances never to return.

At New Orleans, Grenada, Holly Springs, Greenville, Shrevesport and Memphis, the physicians fought this terrible epidemic with unflinching courage until death crowned their labors with diadems of honor. At Memphis especially, did they offer up their lives upon their country's altar. In only a short time one hundred physicians fell from the ranks of the profession into graves made glorious by the honorable sacrifice.

At the beginning and throughout the civil war, with what patriotic loyalty did the medical profession offer up her sons? No sooner was the call made for surgeons than the most exalted professors' chairs were made vacant, as well as the home of the more obscure but none-the-less faithful hamlet doctor, to join the army and administer comfort to those who had fallen in defense of their home.

Warriors upon a thousand fields have won the applause of admiring multitudes. Our history is replete with patriotic deeds, and sacred with the blood of a brave ancestry. We delight to emulate the example they have left us and to do honor to their sleeping dust, but what of the brave doctor who daily meets a foe more insidious and deadly than powder and bullets, a foe that is at all times unseen but never still, scattering continuously his deadly influence by hidden forces, which at times, and places, culminate in an outbreak of smallpox, diphtheria, cholera, yellow fever, typhoid fever and a host of others

equally formidable. The doctor has no picket guard to convey to him the intelligence of an approaching enemy, and when he is summoned to duty he goes, not knowing how, where, or in what form he is to meet the foe, and when in the conflict he fights in open battle, nor has he a shield or buckler to protect him from the assaults of the enemy. With these facts before us we may justly conclude that the true physician is an unselfish patriot.

The pride of ancestry as an incentive to emulation is just, to read over a long list of illustrious predecessor is laudable; but the American physician has greater reason to be proud of the achievement of his American brothers than of all the glory about his ancestors across the sea. But we cease not to be proud of our lineage, or to acknowledge the debt of gratitude we owe to Europe. Her languages are our birthright, her glorious past is a part of our heritage, and her mighty name in art, philosophy and science, and her rapidly advancing civilization incites us to loftier efforts. But from the union of her colonies, from the straightening of their purposes and the crossing of their blood, slowly perfecting through centuries, came at last the true American.

A great thinker has said: "Man advances just in proportion as he mingles his thoughts with his labor"—a truth seen nowhere more clearly than in the progress of medical science. The medical profession of the nineteenth century is wholly different from what it seems to have been a century ago."

Among the pioneers of medicine in this country, quacks with fluent speech and popular manners "flourished as the green bay tree." There was little respect for authority and he who had the eloquence and logic to maintain his theories, whether they were right or wrong, was indeed a champion. Humeral pathology and solidism were subjects of much controversy, the forces being almost equal. Those who supported the former theory referred all processes of disease to the circulation, while the latter referred it to nervous sympathy. The fiercest battles, however, were fought to decide whether fever was idiopathic or symptomatic.

In those days specialists were unknown, but in almost every community some practitioner sprang into notoriety because his genius and daring led him into feats of surgery. Before the day of anæsthetics surgery was little less than human butchery. The torture of the surgeon's knife was indescribable. The screams of the agonized patient and the wailing

of relatives and friends rent the air. Surgeons, after having passed through these sad ordeals, were often known to seek the privacy of their rooms and there give themselves up to weeping when they dared to remember the awful tragedy. Language cannot portray the horrors of the operating room, and yet Brashear had successfully performed amputation of the hip joint, McCreary had extirpated the clavicle and the surgical achievements of Physick, Dudley and Mott had carried their fame throughout the civilized world.

As years multiplied themselves into decades, the domain of medicine extended its borders into fields too comprehensive for any individual physician to become proficient in all its branches, hence the necessity for specialists, who soon began to appear. About the middle of the century the whole realm of surgery was revolutionized by the discovery and application of anæsthetics. Like Minerva from the head of Jove, surgery sprang forth a new science in full panoply. Artists in that line were everywhere seen leisurely carving the flesh of living, sensitive human beings, while their subjects were wrapped in the folds of Lethean slumber.

"Truly out of trials comes the strength of man and out of disaster comes the glory of the state," so came civil war, threatening our political institutions, but arousing the genius and skill of the physician and surgeon. Indeed, it may be truly said that no event in modern history has given a greater impulse to the advancement of surgery, and today we see all over this land, physicians and surgeons, of the ripest judgment and skill, whose stores of experience were gathered amid the echoes of bursting bombs.

Notwithstanding the great progress which has been made in medicine, it must still be regarded from two standpoints; namely, scientific and empirical.

There is yet much to be learned about the science of medicine and so long as that is true there must be empiricism in its practice, but with the advancement of histological and pathological knowledge empiricism will as rapidly disappear.

The invention of the microscope has already unlocked the bolted doors of bacteriology which have stood defiantly against scientific investigators in all the ages past. Seed-thoughts that have long slumbered in the cold soil of indifferent minds, are now bursting into life under the genial warmth of an educational spring-time.

Problems, numerous and complex, which have stood the

test for ages, have been solved in the light of the recent past, while others are rapidly approaching solution. While new discoveries in medical science are being announced in such rapid succession, we may confidently hope that the time is not far distant when the health and vigor of our country may at all times be fortified against the assaults of deadly epidemics which annually sacrifice so many thousand human being to the Moloch of contagion.

We live in an age of great mental development, the public mind is awake, and society in general is fast rising in the scale of developmental progress. Printers' ink, steam and electricity are causing men to think. The closing decades of this century are marked by their unparalleled massing of revolutionary discoveries and startling events. No other equal period of historic time has been so fraught with marvelous conceptions and profound advances in philosophic and scientific research since the dawn of civilization. Even within the present decade it may be truly said that a greater number of scientific discoveries have been developed and announced than in any previous century epoch in the world's history. This progressive march of intellect, these magnificent strides in man's mastery over nature, these astounding revelations of the hidden resources of this universe now so rapidly unfolding themselves, indicate that we are not living in vain, but that intellectuality is in the ascendant.

"I know not what discoveries, what inventions, what thoughts may leap from the brain of the world. I know not what garments of glory may be woven by the years to come. I cannot dream of the victories that may be won upon the field of thought; but I do know that a feeling of hopefulness is gradually stealing over the public mind like the dawn of a new day, and that the successes already attained are the rich fruitage of many a hard-fought battle." The twilight of superstition is fast fading before the advent of scientific truth.

The very age in which we live seems to accelerate its own progressive development by the momentum it receives in each new advance; where it will end we cannot know, but the practical observer, with mind and eye on the alert, gazes into the near future with well-grounded expectation of discoveries in medical science which shall utterly eclipse anything the world has yet seen.

Amidst this general intellectual activity and this unparalleled growth in the medical science, we, as beginners, fellow-

classmates, must take our places. As observers of, and participants in, the benefits resulting from recent discoveries and applied medical research, may we not look with confident hope into the secret archives of nature, for truth yet undiscovered by man, which, when opened, shall reveal with absolute assurance the solution of problems which have stood defiantly through all the ages past. It is a rare privilege to have part, however humble, in this work. Nobler duty was never confided to human hands.

I can think of no more appropriate words with which to close than the language of John G. Whittier to a young physician just beginning his professional career:

“The holiest task by heaven decreed,
An errand all divine,
The burden of our common need
To render less is thine.
The paths of pain are thine, go forth
With patience, trust and hope;
The suffering of this mighty earth
Shall give thee ample scope.
Beside the unveiled mysteries
Of life and death go stand,
With guarded lips and watchful eyes,
And pure of heart and hand.
So shalt thou be with power endued
From Him who went about
The Syrian hillsides doing good
And casting demons out.
That Good Physician liveth yet
The friend and guide to be;
The healer of Genesarat
Shall walk the rounds with thee.”

PROF. DODSON ABROAD.

Through the kindness of Dr. B. M. Linnell we are enabled to print below some extracts from a letter of Prof. Dodson's written to him from Berlin, Germany, July 25, '96.

"We have had a very delightful trip so far and enjoyed Holland immensely. I should like very much to spend a two-months' vacation in Holland and Belgium on a wheel. We visited Rotterdam, The Hague, Amsterdam, Leyden and Haarlem. Leyden with its 400 year old University and a fine statue of Boerhaave especially interested me from a medical standpoint. We came by way of Bremen, where the consul, Dr. Keenan, an old friend of mine and a Rush man of '83, made our stay pleasant. Then by Hamburg to Berlin last Saturday. We are delightfully situated in the most beautiful part of this beautiful city, though I am afraid we shall have to change our quarters, as it is quite a ride from the university and most of the work here is done in the morning. I haven't yet gotten to work thoroughly, but shall be well started next week. I want to take courses with Ewald, Boas and perhaps Kuttner (a younger man) on diseases of the stomach; and work also in the physiological laboratory of Du Bois Reymond—a magnificent building with a fine equipment, of course."

"Saw a clinic by von Bergmann day before yesterday in a finely equipped operating amphitheater seating about 200. The equipment, however, and all the arrangements, struck me as being no better than our own, and the clinic not so instructive as Senn's. The large number of the university buildings, their size and the splendid character of the newer ones are very impressive and make one wish for similar aid from the state for our schools, a thing, however, which with our form of government, is neither probable nor desirable, I take it, and so we must fix our hopes on private beneficence."

The Professor, while abroad, will purchase more instruments for the Laboratory of Experimental Physiology which will greatly add to its efficiency.

OBITUARY OF DR. JOINER.

George Betram Joiner, A. B., M. D., was 29 years and one month old when he died, July 7th, 1896, at the Presbyterian Hospital, Chicago, of tuberculosis affecting the vertebra and meninges of the cord. His illness was of more than six months' duration, of which time there were very few hours in which he was free from most excruciating pain. He was born in Northern Illinois and spent much of his youth in Watseka, Ill., where he is buried beside his father, who preceded him by only about one year.

He began his college life at Olivet College, Olivet, Mich., and finished his literary course with two years at Amherst College, graduating in 1890. He was a member of the Alpha Delta Phi fraternity, prominent always in athletics, especially base-ball, took high rank in the class room and was very popular among his fellows.

In the fall of 1890 he began the study of medicine at Rush and was graduated in 1893. Was interne in the Presbyterian Hospital, finishing his course Jan. 1st, 1895. Here he was conspicuous for his quiet and efficient service.

He began the practice of medicine after a short time as assistant to Prof. Henry M. Lyman (to whom he was related) and so continued until the beginning of his illness in January, of '96. He was one of the corps of instructors of Rush Medical College during the first part of the year of '95 and '96. His field was Practice of Medicine, Gynecology and Obstetrics. He was also an assistant to the Chair of Clinical Medicine.

His life was one of singular purity and devotion to his friends and patients; to his mother and sister, a thoughtful, dutiful son and affectionate brother. In the most trying moments, when racked with pain and suffering, he never forgot to be courteous. Loyalty seemed to be his motto, and loyal he ever remained to his friends and his God, a devoted life, a beautiful character.

B. M. L.

Alumni Department.

JAMES B. HERRICK, A. B., M.D., EDITOR.

MEMBERSHIP IN THE ALUMNI ASSOCIATION OF RUSH MEDICAL COLLEGE is obtainable at any time by graduates of the College, providing they are in good standing in the profession, and shall pay the annual dues, \$1.00. This fee includes a subscription to THE CORPUSCLE for the current year. This journal is the official organ of the Association.

Dues and all communications relating to the Association should be sent to
JOHN EDWIN RHODES, M.D., Sec'y and Treas., 34 Washington St., Chicago

With this number the CORPUSCLE is discontinued to all Alumni subscribers who have not renewed their subscriptions by sending One Dollar to Dr. J. Edwin Rhodes, 34 Washington St., Chicago, to pay dues of Alumni Association and subscription to the CORPUSCLE for one year.

It is a pleasure to see President Holmes out again. The doctor has left for the south of England where he will spend a few weeks. We hope to welcome him back in the Fall and to see him again at his post and with fully recovered health.

Dr. W. J. Butler, '94, has left for Europe. He plans to spend a year of study in Vienna.

The editor of this department is in receipt of a letter from Dr. E. M. Eckard who was connected with this magazine last year. Without the doctor's permission we take the liberty of quoting a few sentences:

PEORIA, ILL., July 11, 1896.

Dear Doctor:—

You will probably notice by the heading that I have become connected with *The Peoria Medical Journal* and have been working in its behalf since leaving school and the CORPUSCLE. I can assure you our journal is a first class periodical and Dr. Will's name at the head is certainly a good recommendation. We are all from Rush. Sincerely and Respectfully,

ELMER M. ECKARD, Class '96.

Dr. F. C. Murphy, of Manito, Illinois, is another loyal graduate. On the corner of his business card is printed: "Grand Old Rush," 1868. "Seek the Truth."

J. L. Taylor, '94 is at Libertyville, Illinois and doing a nice practice. Has to keep three horses and a man. Best of all has a good wife and a fine baby three weeks old.

Dr. J. C. Rhoden, '96, is in partnership with Dr. Mulcahy, Elkpoint, S. Dakota.

Dr. Chas. Bolsta, '95, is in partnership with Dr. Karn, of Ortonville, Minn. They are having a splendid practice.

Dr. George R. Proctor, '96, has entered into partnership with his preceptor at Coleta, Ill.

□ Dr. Frank Weston, '93, was united in marriage June 24th to Miss Minnie Thayer, of Onalaska, Wisconsin. *The La Crosse Press* contains a full description of the wedding and speaks in terms of the highest praise of the estimable young lady and "the rising young physician of Onalaska." The doctor has recently been elected city and county physician and has a rapidly growing practice. We extend to him and his wife the best wishes of the CORPUSCLE.

Dr. P. B. Amunson, of La Crosse, writes that he is enjoying a good practice. He plans to come to Chicago for a week or two in the Autumn to attend clinics and take a rest from hard work

Dr. G. P. Head, '84, is living at Austin, Ill. He has been devoting much of his time to a study of the diseases of the nose and throat and has recently opened an office in the Reliance Building, 100 State street, where he will practise his specialty.

We wish we had the space to quote in full the interesting letter from W. B. Mead, '72, who is at Oberlin, Kansas. It is inspiring to find how loyal are the old graduates to the college and its professors

"I graduated in 1872. A man in twenty-five years has either succeeded or failed. If multiplicity of official duties means success, I am no failure. I am local surgeon of a railroad, president of the board of education, health officer, examiner for all the old line and fraternal insurance societies, and post-master—a presidential office.

Most of the old professors of Rush in my day have crossed the high divide. Dr. Lyman, Dr. Holmes, and Dr. Etheridge still continue to bless the earth. But "Pa" Allen as we called him, Dr. Ross and Dr. Gunn live only in memory. I met Dr. John B. Hamilton when I was at the World's Fair and became well acquainted with him. Remember me kindly to him. I

regard him as a strong man. I hope that Rush may ever continue to be, as she is now, the leading medical institution of this country." Very Truly Yours,

W. B. MEAD, '72.

Another letter from an alumnus of '72 is, we think, worthy of being printed, so full is it of love and enthusiasm for Rush. We give it in full, though modesty should, perhaps, induce us to keep the letter a secret, because of the extravagant praise of THE CORPUSCLE:

NECEDAH, WIS., July 13th, 1896.

JOHN EDWIN RHODES, M. D.

Dear Sir:—I have complied with the demands of your blank that reached me a day or two ago. Enclosed please find the same, along with a one dollar bill to cover the subscription to THE CORPUSCLE for the ensuing year. I am pleased with the magazine and the deep interest it manifests in the prosperity of Rush Medical College and its Alumni. Although not the largest journal, I think the CORPUSCLE'S selections of medical literature as well as its editorials are of as high order as any medical journal that reaches my table. It is always fresh and clean. Long life to THE CORPUSCLE and its able editors.

I am truly delighted at, and every member of the Alumni ought to be proud of, the flattering opinion our college has received abroad as well as at home under the untiring efforts of its present faculty of able men. But while we rejoice at the prosperity of the college to-day and its bright hopes for the future, we should not forget, but, rather should remember with a religious awe, the great and good men who picked the institution up from its ashes of 1871, and spent their best energies to make Rush Medical college what it is proud to be today, the most esteemed school of medicine from the tide-washed beach of the Atlantic to the golden shores of the Pacific. Conspicuous in this band of energetic, ambitious philanthrophists, are the names of DeLaskie Miller, the eminent and venerable Professor of Obstetrics, Ephraim Ingals, Joseph Freer, Moses Gunn, Henry Lyman and others. The living are held in high esteem for their many virtues, the dead are cherished in memory. You may think that I am plastering this on too thick, but I can't help it; these are my sentiments very feebly expressed. I don't think Chicago holds to day a purer, cleaner, truer man than DeLaskie Miller.

Forty-four years hard service in the practice of my profession, a graduate of Pennsylvania Medical College of Phila-

delphia 1852, and Rush 1872, I have seen some hard service, forty years of the time in this place. Obligated finally to retire, owing to results of inflammatory rheumatism, aggravated by three severe attacks of la grippe in the past five years, I have been obliged to forego for some time the pleasure of meeting the Alumni on the occasions of commencements. But I still stand by the Alumni and CORPUSCLE and am proud to see both flourish. I am aware how imperfect these few remarks are in many respects, but trust you will be charitable under the circumstances. With best wishes, I am very sincerely,

F. ANTES CANFIELD.

The Corpuscle.

EDITORS,

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T. R. CROWDER, '97, Sec'y and Treas.

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Communications relative to advertisements and subscription (Subscription price \$1.00 per annum), should be addressed to the publisher. Remittances should be made by money order draft or registered letter payable to "THE CORPUSCLE," and addressed to Fred C. Honnold, 402 S. Paulina St.

RUBY RED AND BLACK: Colors of Lake Forest University. ORANGE: Color of Rush Medical College.

Hemingway's Laminectomy Forceps. Last fall in one of his lectures before the class of '96, Dr. Senn called attention to the need of some better device for performing laminectomy, and suggested that some member of the class invent the needed instrument.

Dr. Clarence E. Hemingway was a member of the class and at once began to act on his professor's suggestion. After diligently experimenting for some months, he had the gratification and honor of finally producing an instrument which Dr. Senn was pleased to say before his "commencement clinic" satisfactorily met the requirements for such an operation.

Dr. Hemingway's promptness and success in acting on his teacher's suggestion gives promise of a very successful career. It would be well for other students to follow his example in efforts to do something of service to their profession.

Anti-Vivisection. There has never been a reform or a "new thing" in the scientific, the political or the religious world that has not met the bigoted opposition of more or less influential obstructionists. Vivisection has been no exception to this rule. The blessings arising from this method of investigation have been recounted until repetition is superfluous. Physiology, pathology and therapeutics are today the acknowledged debtors to vivisection. To stop humane investigation of this sort is to turn back the progress of science and to invite the continued residence of ignorance. There is a bill at present in

Congress to prohibit vivisection in the District of Columbia, which is but the forerunner of one for every state legislature in the country. This bill is receiving the united support of the so-called humane people of the East. These people of paradoxical kindness have allowed slight objections to be so magnified as to obstruct their mental horizon in all directions. "They are mentally and morally myopic." While feeling a sympathy for their unfortunate condition, we insist that the medical profession shall not be hampered by their nonsense and that every physician in the land use his influence to overcome a movement that would curse the progress of experimental medicine.

Surgeon-General George M. Sternberg opposes this bill and says:

"There is no danger of obnoxious bills of this character being passed *if the physicians in the different states do their duty*. It will do no harm to get ready and be on the watch. So far as observation goes, I do not think there is any necessity for legislation upon this subject. In my opinion, it is a mistake to suppose that those engaged in scientific investigation or in teaching physiology are any less humane than the members of the Washington Humane Society, and the passage of an act to place them under the supervision of inspectors appointed by the society would be an unmerited reflection upon them."

The following from *The Journal of the American Medical Association of June 20, 1896*, may surprise some who believe that the Homeopaths really have progressive ideas. "Senator Gallinger's report in favor of legislation to restrict animal experimentation in the District of Columbia, which is a rehash of the report of the American Humane Association, brings to light the important fact that the *homeopathic fraternity* has originated and is pushing this crusade against scientific investigation and progress. *It is a clandestine effort to humiliate the science of medicine*. The Senator concludes his report with the statement that it is the unanimous expression of opinion by the Senate Committee on the District of Columbia, which is equivalent to the assertion that the Senate of the United States will unite with him in the promotion of this homeopathic crusade. Will the profession submit?"

Of course, a profession that relies on mere empiricism for its advancement has no need to resort to vivisection or any other properly scientific method of investigation. We repeat "*Will the profession submit?*"

**The Back-
Number.** Not long since we heard an old practitioner make the statement that he had no use for books and would not exchange his experience from fifty years of practice for the best medical library in America. As the intelligent reader readily infers, this "old practitioner" knew but little, if anything, of the most modern advances in medicine. In the extreme sense of the term, he was a "back number." Gray hairs are to be venerated, but they are not necessarily the stamp of an intelligent experience or the broadest professional knowledge. However, many of our most progressive thinkers have long since passed the time when they can be called young or even "middle aged." There is a tendency on the part of the young and the narrow-minded not to show the proper respect for the experience of their elders. For these we have no word of excuse. As water, they will ultimately find their level, and that is low.

Of all the professions the medical ought to be the last to tolerate the "back number." We doubt if in theology he would cause any more to lose their souls. In law he might cause losses that could be computed in dollars and cents, but in medicine, that has to do with the most vital affairs of life, he causes injuries that seldom can be computed or repaired.

The physician deserving the fullest confidence of the public is the man who does not know it all, but is always trying to know more. He studies *man*, not only physically, but psychologically. He is a man that accepts an effect as a guiding star to a cause, the explanation and remedy for which it is his personal duty to seek.

There are too many in the profession who are neglecting the literature of late date. They impose on a credulous public the crude methods of a dim past. They talk learnedly of "my experience" and Ignorance stands in silent admiration, while Science sadly withdraws longing for the justice of a millenium.





